JVC

Hi-Fi STEREO VIDEO CASSETTE RECORDER

HR-S5000

S-VHS VHS PAL 625

HQ High Quality

SPECIFICATIONS

Format	: S-VHS/VHS PAL standard with Hi-Fi audio
Video recording system	: Rotary two-head helical scan system with slant double-azimuth combination video heads
Hi-Fi audio recording system	: Deep-layer recording system conforming to stereo Hi-Fi VHS standard
No. of audio channels	: 2 Hi-Fi audio channels 1 normal audio channel
Video signal system	: PAL colour and separated Y/C signals, 625 lines
Tape width	: 12.65 mm
Tape speed (SP)	: 23.39 mm/sec
(LP)	: 11.70 mm/sec
Maximum recording time (SP)	: 240 min. with E-240 video cassette
(LP)	: 480 min. with E-240 video cassette
Temperature	
Operating	: 5°C to 40°C
Storage	: -20°C to 60°C
Humidity	
Operating	: 5 % to 80 %
Storage	: 35 % to 80 %
Power requirement	: 220 V~, 50/60 Hz
Power consumption	: 44 W
Video	
Input	: 0.5 to 2.0 Vp-p, 75 ohms, unbalanced
Output	: 1.0 Vp-p, 75 ohms, unbalanced
Signal-to-noise ratio	: 43 dB (Rohde & Schwarz noise meter) with BILDSCHÄRFE control at centre position
Horizontal resolution	: More than 400 lines (S-VHS)/ 250 lines (VHS) with BILDSCHÄRFE control at centre position
Audio	
Input	: Mic: -67 dBs, high impedance, unbalanced AUDIO EING. connector (RCA x 2): -8 dBs, 50 k-ohms, unbalanced A/V1 EING./AUSG. and A/V2 EING. socket (21-pin Peri connector): -3.8 dBs (CENELEC standard), 10 k-ohms, unbalanced
Output level	: A/V1 EING./AUSG. socket (21-pin Peri connector): -3.8 dBs (CENELEC standard), high impedance load AUDIO AUSG. connector (RCA x 2): -6 dBs, high impedance load
Output impedance	: Less than 1 k-ohm, unbalanced
Signal-to-noise ratio	: More than 40 dB
Frequency range	: 70 Hz to 10,000 Hz
Hi-Fi audio	
Frequency response	: 20 Hz – 20,000 Hz
Dynamic range	: More than 90 dB
Wow and flutter	: Less than 0.005 % WRMS
TV tuner/RF section	
Channel storage capacity	: 48 channels
Aerial input	: VHF 47 – 89 MHz 104 – 300 MHz 302 – 470 MHz UHF 470 – 862 MHz
Aerial output	: UHF channels 32 – 40 (Adjustable)
Digital clock/timer	
Clock display	: 24-hour fluorescent digital display with day and date indication
Reference frequency	: Quartz controlled
Start time setting	: Within one year
Programming capacity	: 8 programmes
Dimensions	: 435 mm(W) x 105 mm(H) x 380 mm(D)
Weight	: 7.4 kg
Provided accessories	: Aerial cable, Infrared remote control, "R6"-size battery x 2, Audio cable (RCA-RCA) S-Video cable (4-pin/4-pin) Cassette tape (SE-180) VPV adapter
Optional accessory	: RGB signal converter KM-V7EG

Specifications shown are for SP mode unless otherwise specified.
Design and specifications subject to change without notice.

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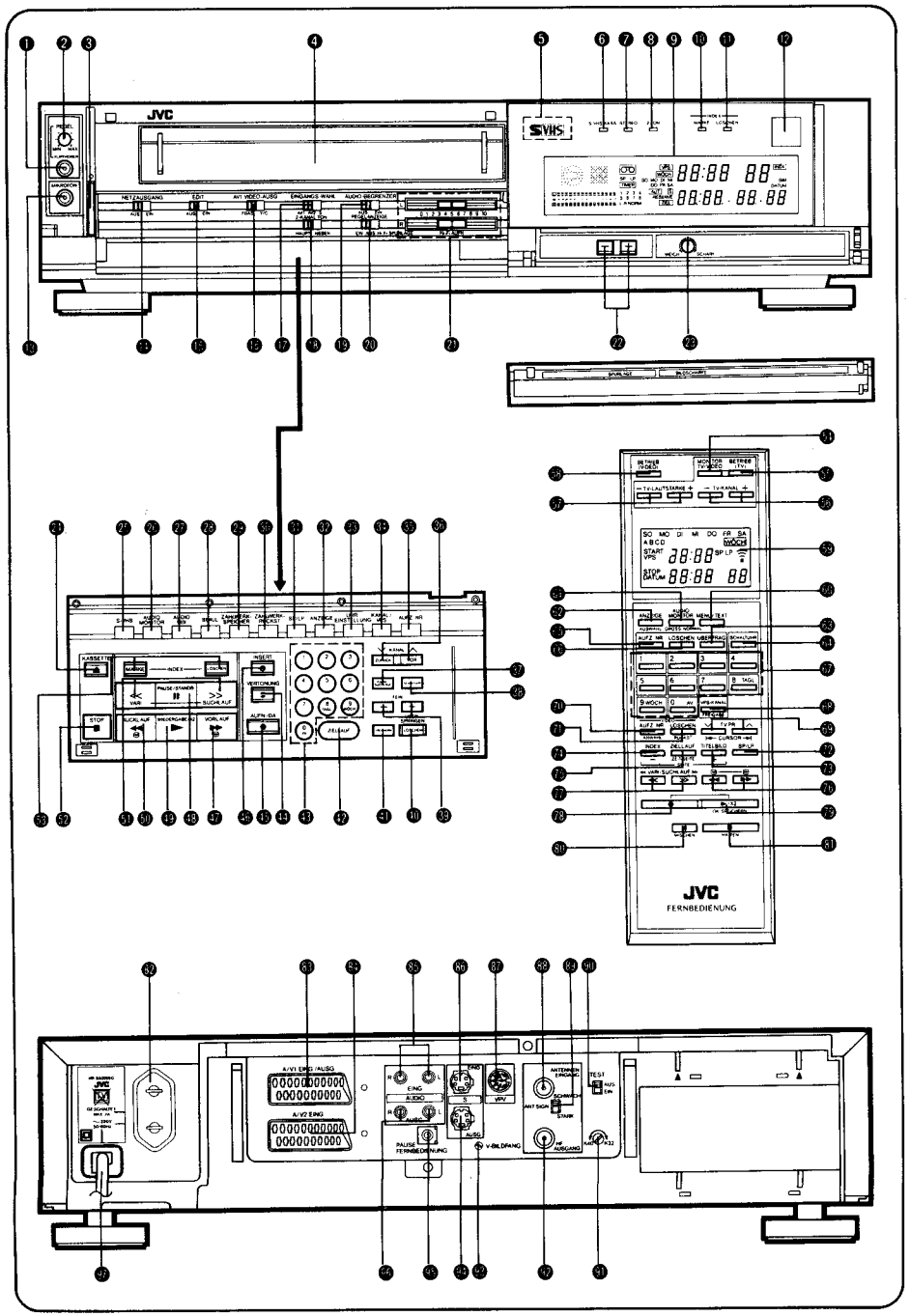

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SAFETY PRECAUTION

The rating plate and the safety caution are on the rear of the unit.

WARNING – DANGEROUS VOLTAGE INSIDE
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

IMPORTANT (In the United Kingdom)
Mains Supply (240 V~, 50 Hz only)

IMPORTANT

Do not make any connection to the Larger Terminal coded E or Green. The wires in the mains lead are coloured in accordance with following code:

If these colours do not correspond with the terminal identifications of your plug, connect as follows:
Blue wire to terminal coded N (Neutral) or coloured Black.
Brown wire to terminal coded L (Live) or coloured Red.
If in doubt – consult a competent electrician.

FOR YOUR SAFETY (in Australia)
Install any external aerial to AS 1417.1

Omkopplaren BETRIEB på denna apparat är sekundärt kopplad och skijer inte apparaten från nätet i läge BETRIEB AUS.

The BETRIEB button does not completely shut off mains power from the unit, but switches operating current on and off.

BEMAERK: I stilling AUS er apparatet stadig forbundet med lysnettet Hvis det ønskes fuldstændig afbrudt skai netledningen trækkes ud.

This unit is produced to comply with Directive 82/499/EEC, CISPR Pub. 13 and Pub. 14 and Standard IEC 65.

Video tapes recorded with this video recorder in the LP (Long Play) mode cannot be played back on a single-speed video recorder.

CAUTION

- When you are not using the HR-S5000EG for a long period of time, it is recommended that you disconnect the power cord from the AC outlet.
- Dangerous voltage inside. Refer internal servicing to qualified service personnel. To prevent electric shock or fire hazard, remove the power cord from the AC outlet prior to connecting or disconnecting any signal lead or aerial.

S-VHS 625

Cassettes marked "S-VHS" and "VHS" can be used with this video cassette recorder. However, S-VHS recordings are possible only with cassettes marked "S-VHS".

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FEATURES

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High-quality pictures

- Super VHS recording and playback circuitry ensuring super-quality pictures with a horizontal resolution of more than 400 lines.
- Separated Y/C signal inputs and outputs for higher quality dubbing and playback of Super VHS signals (4-pin S EING. and S AUSG., and two 21-pin peri-connectors; one for input/output, and the other for input.)
- HQ (High Quality) System circuits (Detail Enhancer, Luminance Signal Noise Reduction, and 20 % higher white clip level) to ensure the best possible pictures in the regular VHS mode.
- Super DA-4 head system for superlative picture quality in all modes in both SP (Standard Play) and LP (Long Play).
- Flying erase head and insert editing circuit for professional-class insert edits.
- Edit switch for best possible dubs.
- Picture sharpness control.

High-quality sound

- Conforms to the Hi-Fi VHS standard for superlative stereo sound with a dynamic range of more than 90 dB.
- Advanced switching noise reduction circuit.
- Hi-Fi recording level controls with ALC switch.
- Peak-hold audio level indicators/Hi-Fi tracking meter.
- Audio dubbing facility.
- Headphone jack with output level control.

Special-effects playback

- Noiseless stills and frame advance.
- Variable-speed slow motion at 1/6, 1/12, 1/18, 1/24 and 1/30 normal speed.
- Variable-speed search at 3,5, and 9 times normal speed in both directions.
- Double-speed forward playback and normal-speed reverse playback.

Tuner features

- Frequency synthesized wide-band cable tuner with 48-channel storage capacity.
- Pretuned to European television broadcast frequencies: VHF, UHF and cable channels.
- Sound-Multiplex capability for recording stereo and bilingual broadcasts.
- 10-Key random-access channel selection and up/down scanning.

Timer features

- 1-Year/8-event 10-key programmable timer.
- Teletext programming through use of the provided VPV adapter.
- VPS recording with built-in VPS decoder.
- Remote programming by data transfer.
- Direct VCR timer programming.
- Instant timer recording.

Remote control features

- Independent timer programming with built-in LCD and 4 programme memories.
- Full control for teletext programming and viewing.
- 10-Digit keypad for timer programming, teletext page setting, channel selection, Index Search and Go-To functions.
- TV control for power on/off, volume, channel and AV mode selection (Designated JVC TVs only).

Tape access features

- VHS Index Search System which automatically places index codes at the beginning of any recording, with mark/erase facilities for manual marking of extra index codes during recording and playback, and manual erasing of unnecessary index codes during playback.
- Automatic location of up to 9 coded programmes by remote-specifying the number of index codes to be skipped. A specified code can be detected in the Shuttle Search, or the faster REW and FF modes for automatic playback.
- Intro search to play back the beginning of each indexed programme for about 5 seconds in fast-motion.
- Realtime go-to function for locating a point on tape a specified time away from the beginning.
- Realtime search function for locating a point on tape a specified time away from the current position in either direction.
- Half-loading mechanism for quick tape access: Index and Intro Search, and Realtime Go-to and Search can all be carried out in the REW and FF modes as well as in the Shuttle Search mode.
- Counter memory function for returning to a designated point on tape.
- Shuttle Search with lock function at 9 times normal speed.

Other value features

- Realtime tape counter showing tape time in hours, minutes and seconds by counting the recorded 25-Hz control signal pulses.
- Automatic functions including Auto Play and Next-Function Memory.
- Automatic backspace editing with Zero Frame Editing system.
- Remaining tape time indicator.
- On-screen record-pause mode display which signals elapsed pause time.
- Electronic tracking controls.
- Switchable AC outlet.

PRECAUTIONS

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Handling and storage

- Avoid using the recorder under the following conditions:
  - extremely hot, cold or humid places,
  - dusty places,
  - near appliances generating strong magnetic fields,
  - places subject to vibrations, and
  - poorly ventilated places.
- Be careful of moisture condensation.
  Avoid using the recorder immediately after moving from a cold place to a warm place or soon after heating a room which was cold. The water vapour in warm air will condense on the still-cold video head drum and tape guides and may cause damage to the tape and the recorder.
- Handle the recorder carefully.
  - Do not block the ventilation openings.
  - Do not place anything heavy on the recorder.
  - Do not place anything which might spill and cause trouble on the top cover of the recorder.
  - Use in horizontal (flat) position only.
- In case of transportation,
  - Avoid violent shocks to the recorder during packing and transportation.
  - Before packing, be sure to remove the cassette from the recorder.

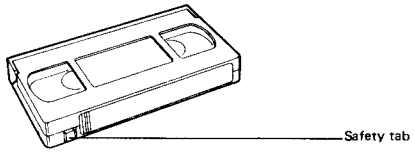
Video cassettes

- This recorder employs S-VHS and VHS cassettes only.

S-VHS: SE-180 for 3 hours/6 hours, SE-60 for 1 hour/2 hours and SE-30 for 30 minutes/1 hour of recording.

VHS: E-240 for 4 hours/8 hours, E-180 for 3 hours/6 hours, E-120 for 2 hours/4 hours, E-90 for 1 hour and 30 minutes/3 hours, E-60 for 1 hour/2 hours and E-30 for 30 minutes/1 hour of recording.

- Video cassettes are equipped with a safety tab to prevent accidental erasure. When the tab is removed, recording cannot be performed. If you wish to record on a cassette whose tab has already been removed, use adhesive tape to block the hole.



- Avoid exposing the cassettes to direct sunlight. Keep them away from heaters.
- Avoid extreme humidity, violent vibrations or shocks, strong magnetic fields (near a motor, transformer or magnet) and dusty places.
- Place the cassettes in cassette cases and position vertically.

Moisture condensation

- If you pour a cold liquid into a glass, water vapour in the air will condense on the surface of the glass. This is called moisture condensation.
- Moisture condensation on the head drum, one of the most crucial parts of the video recorder, will cause damage to the tape.
- Moisture in the air will condense on the recorder when you move it from a cold place to a warm place, after heating a cold room or under extremely humid conditions.
- In conditions where moisture condensation may occur, keep the power cord plugged in an AC outlet and the power switched on; this will help prevent condensation from occurring. When condensation has occurred, it will not evaporate quickly once the power is switched on. Wait a few hours for the recorder to become dry.

Remote control unit

- Avoid violent shocks, especially take care not to drop the unit.
- Take care not to allow liquid to spill into the unit.
- Do not place heavy objects on the unit.
- Avoid leaving the unit in places subject to direct sunlight or extremely high temperatures.

WARNING

Regarding VHS recordings:

1. This recorder can also receive SECAM colour television signals for recording and playback.
2. Recordings made of SECAM television signals produce monochrome pictures if played back on another video recorder of SECAM standard, or do not produce normal colour pictures if played back on another video recorder of PAL standard.
3. SECAM prerecorded cassettes or recordings made with a SECAM video recorder produce monochrome pictures when played back with this recorder.
4. This recorder cannot be used in France. Use a SECAM recorder to record French SECAM signals in France.

Regarding S-VHS recordings:

Since the S-VHS Euro System is a unified standard, S-VHS recordings are the same regardless of whether the original signal is PAL or SECAM. However, this recorder operates only in the VHS mode for recording a SECAM signal.

1. S-VHS recording is not possible when the input signal is SECAM.
2. When this is attempted, the S-VHS indicator goes off and the VHS recording circuit is automatically engaged.
3. The resulting tapes have the same limitations as described in "Regarding VHS recordings".

IMPORTANT: It is permissible to record television programmes only in the event that third party copyrights and other rights are not violated.

CONTROLS, INDICATORS AND CONNECTORS Refer to diagrams on the front foldout page.

Front Panel

❶ **Headphone jack (KOPFHÖRER)**

❷ **Headphone volume control (KOPFHÖRER PEGEL)**
Adjusts the level of the audio output from the headphone jack.

❸ **Operate button with LED indicator (BETRIEB)**
Press to apply operating power to the recorder. The indicator will light. Loading a cassette also turns the power on.

❹ **Cassette loading slot**
Insert a VHS or S-VHS cassette. The door will close and the indicator showing that a cassette is inside will appear on the FDP (fluorescent display). With an S-VHS cassette, the S-VHS KASS. indicator ❻ will also light.

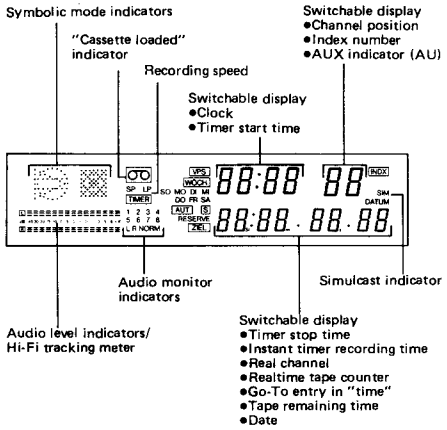
❺ **S-VHS mode indicator**
The "S-VHS" indicator illuminates when the S-VHS recording mode is selected with the S-VHS mode select button ㉒, or when S-VHS recordings are being played back. In playback, S-VHS recordings are automatically detected and played back in the S-VHS mode.

❻ **S-VHS cassette indicator (S-VHS KASS.)**
Lights when a cassette marked S-VHS is inserted.

❼ **STEREO indicator**
Lights when a stereo programme is being received.

❽ **Bilingual indicator (2-TON)**
Lights when a bilingual programme is being received.

❾ **Fluorescent display panel (FDP)**



❿ **Index mark indicator (INDEX MARKE)**
Blinks when an index code is being recorded.

⓫ **Index erase indicator (INDEX LÖSCHEN)**
Lights in the Erase mode, and blinks when an index code is actually being erased.

⓬ **Infrared beam receiving window**

⓭ **Microphone jack (MIKROFON)**

⓮ **AC online switch (NETZAUSGANG)**
AUS : Power is available from the rear panel AC outlet regardless of whether the recorder is on or off.
EIN : Power is available from the rear panel AC outlet only when the recorder is on. When used in combination with the built-in timer, this enables timer-controlled power supply for the connected equipment.

⓯ **EDIT switch**
Normally set to AUS. For making multi-generation dubs, set it to the EIN position.

⓰ **Audio/Video output switch (AV1 VIDEO-AUSG.)**
Selects the signal output via the 21-pin A/V1 EING./AUSG. connector ⓲.
Y/C : Set to this position when delivering the S-VHS signal (Y/C separated video signal) to equipment connected to the A/V1 EING./AUSG. connector. (See page 40.)
FBAS : Set to this position when delivering the ordinary video signal to equipment connected to the A/V1 EING./AUSG. connector. (See page 39.)

⓱ **Auxiliary input select switch (EINGANGS-WAHL)**
Selects the connection for external source recording.
AV1 : Set to this position when recording an input applied to the 21-pin A/V1 EING./AUSG. connector ⓲.
AV2 : Set to this position when recording an input applied to the 21-pin A/V2 EING. connector ㉑.
S : Set to this position when recording an input applied to the S EING. connector ㉖.

⓳ **Bilingual switch (2-KANAL TON)**
HAUPT: To record the main soundtrack (local language).
NEBEN: To record the sub soundtrack (foreign language).
See pages 45 and 52.

⓴ **Automatic level control switch (AUDIO-BEGRENZER)**
Set to AUS when adjusting the hi-fi audio recording level manually.

㉑ **Level indicator switch (PEGELANZEIGE)**
Selects the function of the audio level indicators. See page 46.

㉒ **Hi-Fi audio recording level controls (Hi-Fi AUFN.)**
Use to adjust the hi-fi audio recording level, referring to the audio level indicators on the FDP. See page 46.

㉓ **Tracking controls (SPURLAGE -/+)**
If noise bars are seen during playback (normal or slow), use these buttons to reduce them. The tracking is reset to standard when both buttons are pressed together, the cassette ejected, or the power turned off.

㉔ **Picture sharpness control (BILDSCHÄRFE)**
Turn this knob clockwise to make the picture sharper. Turn counterclockwise to give the picture a softer tone. Effective only for playback pictures. (No effect for recording.)

㉕ **Eject button (KASSETTE)**

㉖ **S-VHS mode select button**
This button switches between S-VHS and VHS recording modes. When the S-VHS mode is selected, the S-VHS indicator ❺ illuminates. S-VHS recordings are possible only when S-VHS cassettes are used in the S-VHS recording mode.

㉗ **AUDIO MONITOR button**
Each time this button is pressed, the audio channel to be output changes and is indicated by the L and R indicators on the FDP.

㉘ **AUDIO MIX button**
Press to select for listening to either the hi-fi or normal soundtracks or to a mixture of the two.

㉙ **Simulcast button (SIMUL)**
Press to record the video signal and normal audio signal from the built-in tuner and the hi-fi audio signal from the rear panel AUDIO EING. connectors. "SIM" will appear on the FDP. When recording FM simulcast TV programmes, use this setting.

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㉚ **Counter memory button (ZÄHLWERK-SPEICHER)**
When this button is pressed, [S] will appear on the FDP and the tape will stop automatically at the counter reading of about "0st 00m 00s" in the Rewind or Fast Forward mode.

㉛ **Counter reset button (ZÄHLWERK-RÜCKST.)**
Press to reset the tape counter reading to "0st 00m 00s".

㉜ **SP/LP button**
Press to select the recording mode (SP or LP).

㉝ **Display button (ANZEIGE)**
Press to change the display from the Timer Set mode to the Clock mode. Usually use this button to switch the display to realtime tape counter, remaining tape time (RESERVE) and date (DATUM).

㉞ **Clock adjust button (UHR-EINSTELLUNG)**
Press to adjust the clock.

㉟ **Channel set/VPS button (KANAL/VPS)**
A dual-function button. Serves as a VPS command enter button in timer programming (See page 59.)
Normally functions to engage the Real Channel mode (See page 43.)

㊱ **Programme button (AUFZ. NR.)**
Press to programme the timer.

㊲ **Channel (∨ / ∧) (Back/Next) buttons (KANAL (ZURÜCK/VOR)**
Press either button to scan to a desired channel. These buttons can also be used as cursor keys for 10-key programming.

㊳ **Channel search button (KANAL-SUCHLAUF)**
Press to initiate automatic scan tuning in the Real Channel mode. (See pages 43 and 44.)

㊴ **Timer button (SCHALTUHR)**
Press to engage the Timer Recording Standby mode.

㊵ **Fine (-, +) buttons (FEIN)**
To fine-tune in to a certain station by shifting the frequency in both directions. (See page 44.)

㊶ **Cancel/Skip button (LÖSCHEN/ÜBERSPRINGEN)**
A dual-purpose button. Use to clear the programmed data in the Timer Set mode or skip unnecessary channels in the Channel Set mode. (See page 58 or 44.)

㊷ **Store button (SPEICHERN)**
Press to store necessary channels. (See page 44.)

㊸ **Go-to button (ZIELLAUF)**
Press to engage the Realtime Go-To mode. See page 54.

㊹ **Multi-purpose numeric keys**

Channel selection:	See page 44.
Clock setting:	See page 42.
Timer programming:	See pages 57 and 58.
Realtime Go-To:	See page 54.
Index Search:	See page 53.
External source recording:	See page 61.

㊺ **Audio dub button (VERTONUNG)**
Press while in the Still mode, then press the WIEDERGABE/x2 button for audio dubbing. (See page 56.)

㊻ **Record/Instant Timer Recording button (AUFN./DA)**
Press once to start recording. Pressing it again engages the Instant Timer Recording mode. See page 51.

㊼ **INSERT button**
Press this button for insert editing. See page 60.

㊽ **Fast Forward/Shuttle Search button (VORLAUF)**
To fast forward the tape, press this button while in the Stop mode. To view the speeded-up picture in the forward direction for programme search, use this button while in the Play mode.

㊾ **Pause/Still button (PAUSE/STANDB.)**
Press to stop the tape temporarily to avoid recording of unwanted material or to view a still picture. The still picture can be advanced step by step.

㊿ **Play/x2 button (WIEDERGABE/x2)**
Press once to play back the tape; press again for double-speed playback. Also press this button to cancel the Pause/Still, Slow and Search modes.

(51) **Rewind/Shuttle Search button (RÜCKLAUF)**
To rewind the tape, press this button while in the Stop mode. To view the speeded-up picture in the reverse direction for programme search, use this button while in the Play mode.

(52) **Variable-speed search buttons (VARI-SUCHLAUF)**
Press either the "≪" or "≫" button to search for a specific segment of the programme at variable speeds. To cancel the variable-speed Search mode, press the WIEDERGABE/x2 button. For more details see page 50.

(53) **STOP button**
Press to stop the tape.

(54) **Index mark/erase buttons (INDEX MARKE/LÖSCHEN)**
Press MARKE during playback or recording to put an index code on the tape. (See page 53.)
Press LÖSCHEN during playback to erase an index code. (See page 53.)

Remote Control Unit

TV Operation buttons (Designated JVC TV models only.)

(55) **MONITOR TV/VIDEO button**
Press to select the TV's operating mode: TV for viewing broadcast programmes or tape programmes via HF AUSGANG connection, and VIDEO for viewing programmes via A/V1 EING./AUSG. connection.

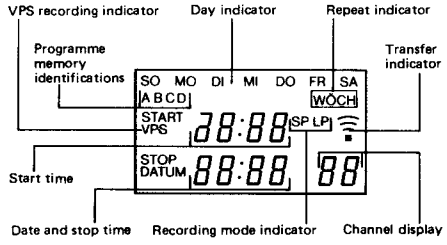
(56) **Operate (TV) button (BETRIEB (TV))**
Press to turn the TV power on or off.

(57) **TV channel buttons (TV-KANAL)**
Press to select a desired channel on the TV receiver.

(58) **TV volume buttons (TV-LAUTSTÄRKE)**
Press "-" or "+" to decrease or increase the TV's sound volume.

(59) **Operate (video) button (BETRIEB (VIDEO))**
Press to turn the recorder power on or off.

(60) **LCD (Liquid Crystal Display) panel**
Refer to this panel when programming the remote control's built-in timer memory.



(61) **Menu/Text button (MENÜ/TEXT)**
Refer to the "Handy Teletext & VPV Operation Guide" accompanying this instruction manual.

(62) **AUDIO MONITOR button**

(63) **Display button (ANZEIGE)**

(64) **Transfer button (ÜBERTRAG)**
Press to transfer the data held in the memory to the recorder.

(65) **Timer button (SCHALTUHR)**

⑭ Programme button (AUFZ. NR.)
Press to programme the remote control's timer memory.

⑮ Cancel button (LÖSCHEN)
Press to cancel the programmed data in the remote control's timer memory.

⑯ Multi-purpose numeric keys

⑰ VPS/channel button (VPS/KANAL)

⑱ CURSOR/TV PR. buttons

⑲ Video programme button (VIDEO AUFZ. NR.)
Press to programme the recorder's timer memory directly from the remote control.

⑳ Video cancel button (VIDEO LÖSCHEN)
Press to cancel the programmed data held in the recorder's timer memory.

㉑ SP/LP button

㉒ Intro button (TITELBILD)
Press to engage the Intro Search mode. (See page 55.)

㉓ INDEX button
Press to engage the Index Search mode. (See page 53.)

㉔ Go-to button (ZIELLAUF)
Press to engage the Go-To mode. (See page 54.)

㉕ Rewind and Fast Forward buttons (◀◀ / ▶▶)

㉖ Variable search button (VARI-SUCHLAUF)

㉗ Record button (●)
Press together with the play button ㉘ to start recording.

㉘ Play/x2 button (▶ /x2)

㉙ Pause/Still button (▮▮)

㉚ Stop button (■)

Note:
Several buttons on the remote control unit have additional functions (as suggested by additional labels). For those functions refer to the "Handy Teletext & VPV Operation Guide" accompanying this instruction manual.

Remote Control Unit

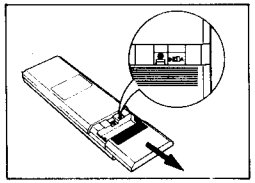
A/B mode switching
A switch on the back of the remote control labelled A/B is accessible when the battery compartment cover is removed.
- This switch is preset to the "A" position. Do not touch it unless you use two JVC video decks side by side.
- When you place two JVC video decks near each other, use this remote control in the "B" mode to prevent both decks from responding simultaneously to this remote control's signals. For this purpose, carefully follow the instructions below:

(1) Unplug the power cord of the HR-S5000EG from the AC outlet.
(2) Set the remote control unit's A/B mode switch to "B".
(3) Plug the power cord of the HR-S5000EG into the AC outlet.
(4) Turn on the power of the HR-S5000EG using the remote control's BETRIEB (VIDEO) button.
- The HR-S5000EG "memorises" this B code and then will respond only to the signals of this remote control unit. The other deck will respond only to its remote control.

Note:
Do not operate other remote controls after you have plugged the HR-S5000EG into the AC outlet and before you press the BETRIEB (VIDEO) button of this remote control.

Operating distance for remote control unit
- The maximum operating distance is about 8 m.

Installing the batteries
- Insert two "R6"-size batteries (provided) into the battery compartment on the rear of the remote control unit, observing correct polarity.



Rear Panel

㉛ AC outlet
Connect the power cord of other audio or video equipment (such as an FM tuner) requiring less than 2 A of current. This outlet is controlled by the NETZAUSGANG switch ㉜.

㉜ A/V input/output connector (A/V1 EING./AUSG.)
A 21-pin standardised (peri) audio/video input/output socket for the connection to a TV or a 2nd video recorder equipped with the same type of socket. The input from this socket can be recorded with the EINGANGS-WAHL switch ㊱ set to AV1 in the AUX mode (engaged by pressing the numeric key "0" to obtain "AU" in the channel display). The output signal format (separated luminance and chrominance signals or composite video signal) can be selected with the AV1 VIDEO-AUSG. switch ㊲.

㉝ A/V input connector (A/V2 EING.)
A 21-pin audio/video input socket for the connection to a 2nd video recorder or VideoMovie for dubbing. The input from this socket can be recorded with the EINGANGS-WAHL switch ㊱ set to AV2 in the AUX mode (engaged by pressing the numeric key "0" to obtain "AU" in the channel display).

㉞ Audio input connectors (AUDIO EING.)
Connect an audio tape recorder or other audio sources for recording sound onto the hi-fi audio track.

㉟ S input connector (S EING.)
A special S-VIDEO input connector (4-pin). To record 2nd video recorder or VideoMovie for dubbing. The input from this socket can be recorded with the EINGANGS-WAHL switch 17 set to AV2 in the AUX mode (engaged by pressing the numeric key "0" to obtain "AU" in the channel display).
EINGANGS-WAHL switch ㊱ to S.

㊱ VPV connector
Connect the provided VPV adapter for viewing teletext broadcasts or programming the timer through use of teletext services. (See page 39.)

㊲ Aerial input connector (ANTENNEN EINGANG)
Connect an aerial to this connector.

㊳ Attenuator switch (ANT. SIGN.)
Set to SCHWACH to receive broadcasts from distant stations. Set to STARK to receive broadcasts of high field strength.

㊴ TEST signal switch
Set to EIN when tuning your TV receiver for the video channel. A test signal in the form of two vertical white bars will be available.

㊵ RF converter frequency adjustment screw (K40 – K32)
See page 42.

㊶ RF output connector (HF AUSGANG)
Connect to the aerial terminal of a TV receiver through the aerial cable (provided).

㊷ Vertical lock control (V-BILDFANG)
Turn this control to eliminate vertical jitters in the Still mode.

㊸ S output connector (S AUSG.)
A special S-VIDEO output connector (4-pin). Connect to the S-VIDEO input terminal of a 2nd S-VHS video recorder or a television equipped with the same type of terminal, using the provided S-VIDEO cable.

㊹ Remote pause control terminal (PAUSE FERNBEDIENUNG)
When using a JVC video camera, connect the remote control cable of the camera adapter to this terminal for the purpose of controlling the starting and stopping of the tape with the camera's start/stop switch.

㊺ Audio output connectors (AUDIO AUSG.)
Both hi-fi and normal audio signals can be obtained from these connectors. The output can be selected with the AUDIO MONITOR button (● , ●) and the AUDIO MIX button ●.

㊻ Power cord

ENGLISH

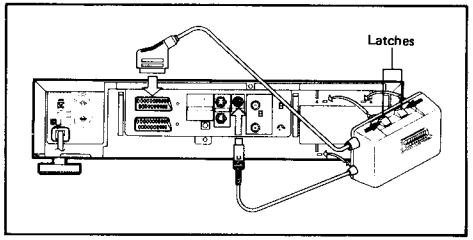
CONNECTIONS

VPV adapter connection

A VPV (Videotext-Programmed Video recorder) adapter is provided with the HR-S5000EG. By connecting this adapter to the rear panel, the HR-S5000EG permits viewing teletext information in several page access modes and lets you programme the timer or adjust the clock, automatically or manually, using the on-screen display. Referred to as VPV functions, all necessary information regarding the additional functions is included in a handy booklet supplied together with this instruction manual.

Caution:
Before connecting or disconnecting the VPV adapter, be sure to turn the video recorder's power off.

To use VPV functions, first connect the VPV adapter as illustrated: Insert the two lower hooks of the adapter into the lower slots of the recorder, and then the two upper hooks into the upper slots while squeezing the latches together. Insert the 21-pin peri-connector plug into the recorder's A/V1 EING./AUSG. connector and the 8-pin plug into the recorder's VPV connector. Once the VPV adapter is connected, the adapter's 21-pin peri-connector functions in place of the recorder's the A/V1 EING./AUSG. connector.
Therefore, throughout this instruction manual, in cases when the VPV adapter is connected to the recorder, the "A/V1 EING./AUSG. connector" refers to the VPV adapter's 21-pin connector.



Aerial connection

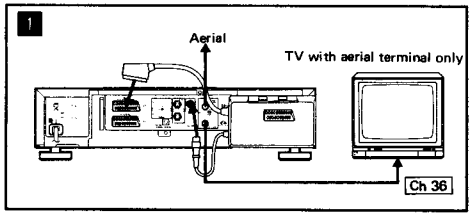
Remove the aerial cable from the TV receiver and reconnect it to the ANTENNEN EINGANG terminal of the recorder.

TV connection

For flexibility, the HR-S5000EG has a pair of S-VIDEO connectors (S EING. and AUSG.), and two 21-pin A/V peri-connectors. The S-VHS signal is composed of separated Y/C (luminance/chrominance) signals, while the regular video signal is a composite video (FBAS) signal in which the luminance and chrominance signals are mixed.
One of the 21-pin A/V connectors (A/V1 EING./AUSG.) is an input/output connector which accepts the separated Y/C or composite video signal (and audio) and delivers either the separated Y/C or the composite video signal depending on the setting of the AV1 VIDEO-AUSG. switch ㊲. The other 21-pin A/V connector (A/V2 EING.) is an input connector which accepts either the separated Y/C or composite video signal. The 4-pin S EING. and S AUSG. connectors are exclusively for the separated Y/C signals; use the provided S-VIDEO cable when using these connectors.
Depending on the type of your television, choose one of the connecting methods shown here. The accompanying numbers indicate ranking of the available picture quality: The larger the number, the higher the picture quality. To take best advantage of S-VHS pictures, it is recommended that you choose ■, ■, or ■.

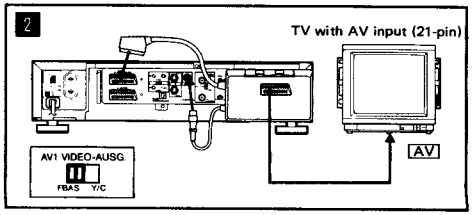
(1) RF connection

Connect the HF AUSGANG terminal of the recorder to the aerial terminal of the television using the provided aerial cable. Both video and audio (monaural) signals are fed to the television and their resulting pictures can be viewed by setting the television to your video channel (see page 42). This RF connection must be done in all other cases too, because the aerial signal is fed to the television via the HF AUSGANG terminal when viewing television programmes or when recording one programme while watching another.



(2) 21-Pin connection

(a) AV connection
Connect the A/V1 EING./AUSG. connector of the recorder (or VPV adapter's 21-pin connector) to the AV IN connector of the television. Both video and audio (stereo) signals are fed to the television and their pictures and sound can be viewed and listened to by setting the television to the AV mode. The AV1 VIDEO-AUSG. switch ㊲ must be set to FBAS.



(b) RGB connection

For this connection, the optional KM-V7EG RGB signal converter is necessary. Connect the A/V1 EING./AUSG. connector of the recorder (or VPV adapter's 21-pin connector) to the RGB signal converter, and the RGB signal converter to the RGB-compatible AV IN connector of the television. The Y/C signal is converted into an R/G/B signal and high-quality S-VHS pictures are available. For this purpose, set the AV1 VIDEO-AUSG. switch ❿ to Y/C and put the television in the RGB mode.

(c) Y/C connection

If your television is equipped with a Y/C-compatible AV IN connector, simply connect the A/V1 EING./AUSG. connector of the recorder (or VPV adapter's 21-pin connector) to the Y/C-compatible AV IN connector of the television. To reproduce high-quality pictures, set the AV1 VIDEO-AUSG. switch ❿ to Y/C and put the television in the Y/C mode.

(3) 4-Pin S connection

If your television is equipped with a 4-pin S-VIDEO IN connector, simply connect the S AUSG. connector of the recorder to the S-VIDEO IN connector of the television using the provided S-VIDEO cable, and connect the AUDIO AUSG. connectors of the recorder to the AUDIO IN connectors of the television.

Note:
For switching the TV's input mode, refer to the instruction manual of your television.

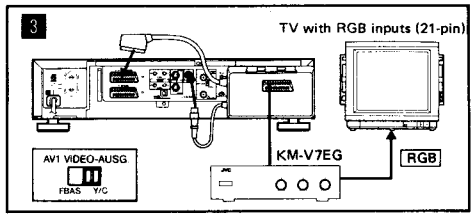
Audio connection

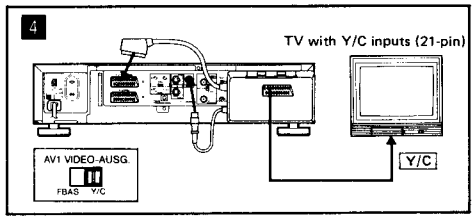
For more dynamic sound reproduction, a stereo system can be connected. By doing so, even with monaural televisions, you can play stereo and bilingual programmes. When listening to sound from the connected stereo system, turn down completely the sound volume of the television.

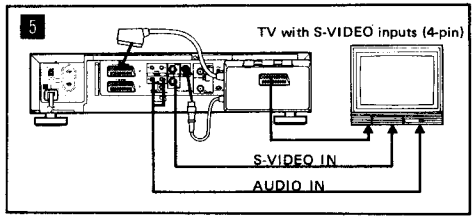
Connect the AUDIO EING. L and R connectors of the recorder to the recording output terminals of the amplifier, and connect the AUDIO AUSG. L and R connectors of the recorder to the AUX IN or TAPE MONITOR terminals of the amplifier.

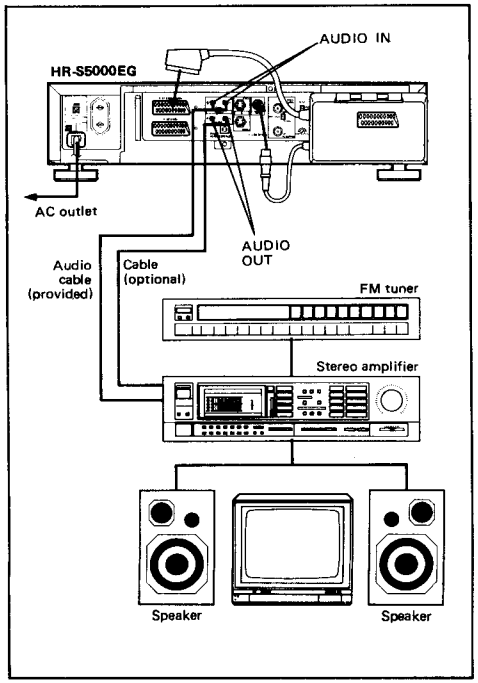
If you want to timer-control the recording of FM simulcast programmes, connect the tuner's power cord to the HR-S5000EG's AC outlet. Set the NETZAUSGANG switch ❽ to EIN, and both the tuner and the recorder will be switched on at the recorder's preprogrammed time. Timer-controlled recording of FM simulcast programmes is not possible with the type of tuners which reset the channel each time the power is switched off.

CAUTION
- The HR-S5000EG has a dynamic range of more than 90 dB with regards to its hi-fi audio capability. It is recommended that you check the maximum level if you are going to listen to the hi-fi audio signals through a stereo amplifier. A sudden surge in speaker input may cause speaker damage.
- Some speakers and televisions are specially shielded to prevent television interference. If both are of the non-shielded type, do not place the speakers adjacent to the TV set, otherwise the video playback picture will not be normal because of mutual interference.









ENGLISH

FOR A BETTER UNDERSTANDING OF S-VHS AND VHS

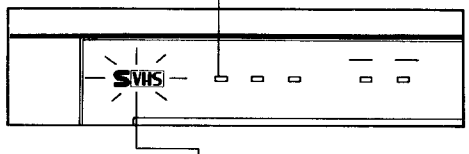
S-VHS vs. VHS

- VHS is the world's most popular video format. If you owned a VCR before the HR-S5000EG, most likely it was a VHS machine.
- S-VHS is a new video sub-format based on VHS. It offers superior picture quality with a horizontal resolution of more than 400 lines by shifting the FM carrier frequency of the luminance signal from the conventional 3.8 – 4.8 MHz range to a higher one of 5.4 – 7 MHz.

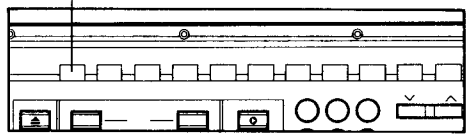
- The HR-S5000EG is equipped for recording and playback in both the S-VHS and VHS formats. Therefore, you can still play back your VHS software programmes and previously recorded family recordings.
- You can switch to the world of S-VHS for your new recordings to enjoy breath-taking picture quality. Or to exchange recordings with someone whose VCR is not S-VHS, simply record in the VHS mode, whether with a regular VHS cassette or an S-VHS cassette.

S-VHS Recording

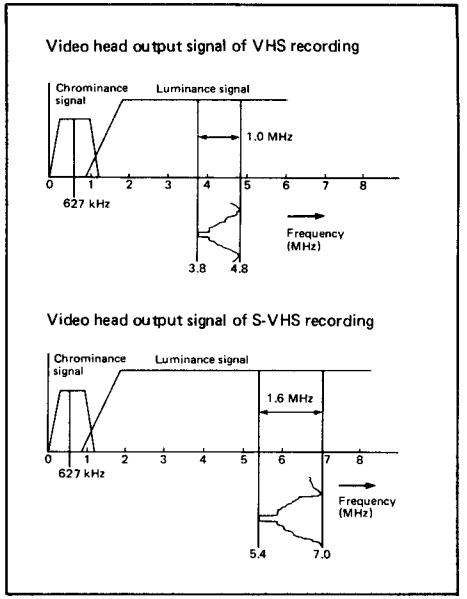
Insert an S-VHS cassette: this indicator will light.



Press the S-VHS button: this indicator will light.

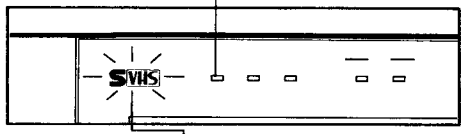


Recording Signal Spectrum



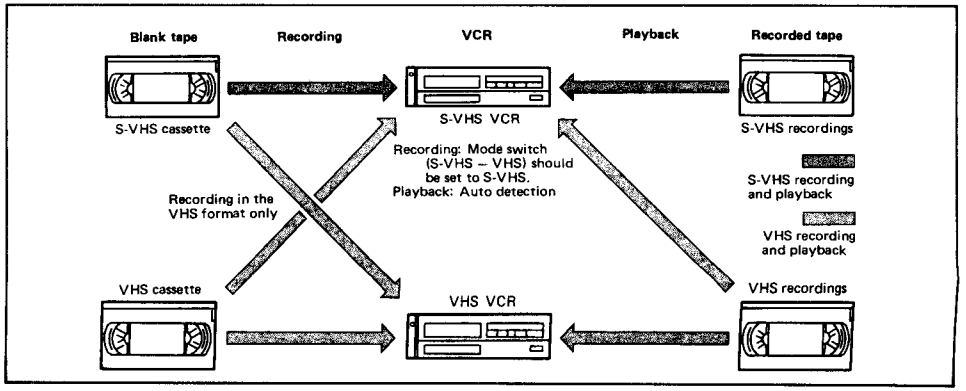
S-VHS Playback

Simply insert a recorded S-VHS cassette: this indicator will light.



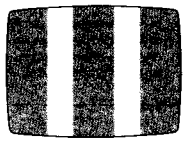
When playback starts, this indicator will light automatically.

Compatibility between S-VHS and VHS



VIDEO CHANNEL SETTING

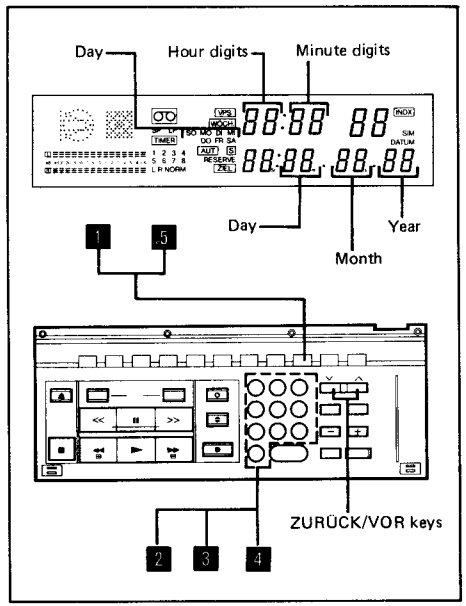
1 Press the BETRIEB button ③ to turn the power on. Turn on the TV receiver.
2 Set the TEST switch ⑳ to EIN.
3 Adjust your TV receiver in the vicinity of UHF channel 36 until you bring in the two white signal bars on the screen as illustrated. This is your VIDEO CHANNEL.
4 Reset the TEST switch to AUS.



Notes:
- If some interference noise is seen on the screen because of broadcasts on neighbouring channels or if your preset broadcasts should be affected in picture quality, it is necessary to shift the RF converter output frequency from that of channel 36. Consult your JVC dealer for making this adjustment.
- Video channel setting is also possible using a prerecorded VHS video cassette. Play back the tape and tune the TV receiver to obtain clear pictures and sound while monitoring the playback picture on the TV screen.
- If your TV receiver is not provided with an AFC circuit, perform fine tuning of the TV receiver when you are actually viewing video cassettes.

CLOCK SETTING

Plug the HR-S5000EG into an AC outlet. The display shows a blinking "0:00".
- Clock setting can also be performed by using the on-screen display. Refer to the "Handy Teletext & VPV Operation Guide" accompanying this instruction manual for on-screen clock setting.



Power failure indicator
The blinking "0:00" (initial condition of the display) is also a power failure indicator, showing that there has been a power failure exceeding 3 to 5 minutes. Re-adjusting the time restores the normal condition of the clock display.

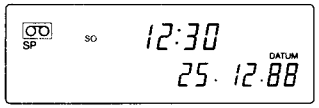
1 Press UHR-EINSTELLUNG ⑰ .
- The display will change to the Clock Set mode with the hour digits blinking and ready for entry.

2 Set the hour and minute in that order.
- To set a one-digit numer, first press "0", then press the numeric key for 1 to 9.
- Zero will not be displayed in the tens place of the hour indication unless the cursor is moved back to the hour digits.
- For a two-digit number, simply press the corresponding numeric keys in the right order.
- In hour setting, numbers larger than 23 will be rejected.
- In minute setting, numbers larger than 59 will be rejected.

3 Set the day and month in that order.
- The setting method is the same as for time setting.
- In day setting, invalid numbers such as 32 of January or 30 of February will be rejected.
- 29 of February will be accepted only during leap years.
- In month setting, numbers larger than 12 will be rejected.

4 Set the year.
- Key in only the last two digits of the year.

5 Press UHR-EINSTELLUNG.
- Press it at the exact instant of the time signal, and the clock will be set accurately to the present time.
- The day-of-the-week indication will be displayed automatically.

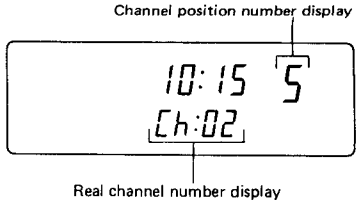


Notes:
- If you press a wrong numeric key, you can return to the previous position using the ZURÜCK key ⑯ .
- Once all necessary data have been entered, you can reach any position for correction using the ZURÜCK and VOR keys.
- Clock setting is not possible during playback, or if the SCHALTUHR button ⑱ is engaged with the TIMER indicator lit. First check to see that the TIMER indicator is off.

ENGLISH

OPERATING THE BUILT-IN TUNER

The HR-S5000EG incorporates an advanced frequency synthesized tuner which is pretuned to 112 channels to cover VHF, UHF and CATV broadcasts. Channel indication is given in two different ways: real channel numbers and channel position numbers. Real channel number indication is available by pressing the KANAL/VPS button ㉘ or VPS/KANAL button ㉖ , during search by pressing the KANAL-SUCHLAUF button ㉗ , while channel position number indication is always available in the channel display.



Correspondence between 112 pretuned TV stations and the HR-S5000EG's real channel indications

DISPLAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
Ch	–	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	A	B	C	D	E	F	G	H
CC	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20
	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	U1	U2	U3	U4	U5	U6	U7	U8	U9	U10
	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99
DISPLAY	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Ch	E21	E22	E23	E24	E25	E26	E27	E28	E29	E30	E31	E32	E33	E34	E35	E36	E37	E38	E39	E40
CC	S21	S22	S23	S24	S25	S26	S27	S28	S29	S30	S31	S32	S33	S34	S35	S36	S37	S38	S39	S40
DISPLAY	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ch	E41	E42	E43	E44	E45	E46	E47	E48	E49	E50	E51	E52	E53	E54	E55	E56	E57	E58	E59	E60
CC	S41	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DISPLAY	61	62	63	64	65	66	67	68	69			75	76	77						
Ch	E61	E62	E63	E64	E65	E66	E67	E68	E69			–	–	–						
CC	–	–	–	–	–	–	–	–	–			X	Y	Z						

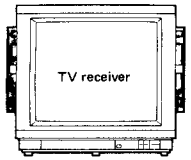
Stored channels
A total of 112 channels are receivable. Of them, up to 48 can be stored for easy channel selection. Prior to shipment, some channels are stored.
It is possible to store more channels or skip some channels if there are no broadcasts on those channels in your area. It is possible to change the stored channels to correspond to your preferred channel allocation. Skipped channels can be restored whenever necessary.
- Channel memories are permanent; the programmed channel allocation will not be erased even if the recorder is unplugged from the AC outlet.

Channel selection
To select a channel for recording, normally use the KANAL (TV PR.) buttons ⑫ (⑬) or 10 numeric keys ⑧ ⑨ . You can choose any channel from among the stored ones by calling up the corresponding channel position number.
- Use the KANAL " ∨ " button to scan to a channel in the direction of decreasing numbers; the KANAL " ∧ " button, in the direction of increasing numbers.
- When using the 10 numeric keys, pay attention to the following: To set a one-digit number, first key in 0. To key in a two-digit number, enter numbers in sequence. The number entered first will be shifted to the tens place. An invalid number (larger than 48) will be rejected.

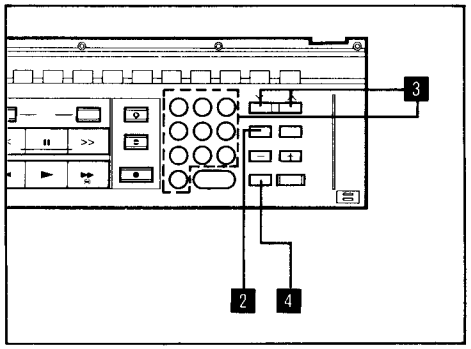
If you want to select a channel other than those stored, engage the Real Channel mode and call up a channel, while referring to the real channel number display.
With recorder's controls:
- Press the KANAL/VPS button ㉘ to engage the Real Channel mode and call up a channel by using the 10 numeric keys. Or simply press the KANAL-SUCHLAUF button ㉗ .

With remote control:
- Press the VPS/KANAL button ㉖ to engage the Real Channel mode and call up a channel by using the 10 numeric keys. For details refer to the next page.

Storing channels



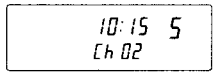
Turn the TV receiver to ON and adjust it to your video channel.



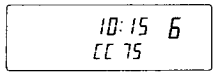
A. Automatic setting

1 Turn the recorder's power on.
- The display will change from the Date mode to the Counter mode.

2 Press the KANAL-SUCHLAUF button ⑰ .
- The display will change to the Real Channel mode and automatic scanning will take place for "Ch" channels, then for "CC" channels.
- Reverse search will be engaged if the KANAL-SUCHLAUF button is kept depressed.

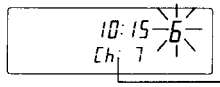


VHF channel 2 is stored for channel position 5.



Cable channel 75 is stored for channel position 6.

- When a broadcast is detected, scanning stops automatically and the displayed channel position number will blink.



"Colon" will appear to indicate that this real channel is not stored for the indicated channel position.

3 Select a channel position into which you wish to store that station by using the numeric keys ⑱ or the KANAL buttons ⑲ while the channel position number is blinking.

4 After confirming the real channel number and channel position number, press the SPEICHERN button ㉑ until the channel position number stops blinking.
- "Colon" will disappear and the selected station has been stored.

B. Manual Setting from remote control unit

(1) Press the VPS/KANAL button ㉕ .
- The display will change to the Real channel mode.

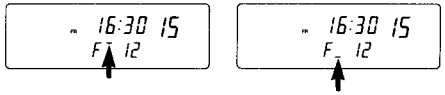
(2) Press the VPS/KANAL button until the real channel number starts blinking.
- Pressing the VPS/KANAL button will alternate the real channel mode between Ch and CC.
- Blinking will stop in 10 seconds.

(3) Enter the number of a real channel to be preset.
- The channel position number will start blinking.

(4) Select a channel position into which the selected real channel is to be stored, using the 10-digit keypad.
- Always key in a two-digit number ("05" for channel position 5 for example) and depress the numeric key for the second digit continuously until blinking stops. This enables the entered number to be stored.
- The display will return to the clock mode by simply keying in the channel number to be viewed.

● Fine Tuning

For fine tuning, use the FEIN "+" or "–" button ⑱ in step 3 (both in automatic and manual setting) "+" to fine-tune in the direction of increasing frequencies, and "–" to fine-tune in the direction of decreasing frequencies.



Upper or lower "-" sign indicates the operating tuning frequency is above or below the standard broadcast frequency.
Centre "–" sign will appear when it corresponds to the standard.

Skipping the stored channels

1. Call up the channel position number that you wish to skip by using the KANAL buttons or 10 numeric keys.
2. Press the KANAL/VPS button.
3. Press the UBERSPRINGEN button ㉕ .
   - "Colon" will appear to indicate that the displayed real channel is not stored.
   - The skipped channel position number will not appear on the channel display during up/down scan tuning.

Note:
If no command is given after each step of the setting operation, the Real Channel mode will be automatically cancelled in 10 seconds.

ENGLISH

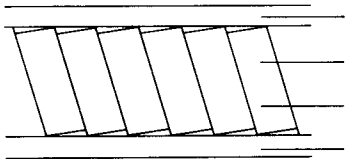
INFORMATION ON THE HR-S5000EG'S AUDIO SYSTEM

Hi-Fi and normal audio

To provide true hi-fi audio accompaniment to video entertainment and, at the same time, compatibility with regular VHS tapes, the HR-S5000EG employs a unique audio recording system. Hi-fi audio signals (2-channel) are recorded deep into the tape's magnetic coating, and the video signal is recorded on top of the audio signals in a shallower layer. At the same time, another audio head records normal audio signals (monaural) onto the usual longitudinal audio track. Since this longitudinal audio track is exactly the same as on monaural VHS tapes, VHS tapes recorded on the HR-S5000EG can be played back on other monaural VHS machines, and vice versa. Also, this longitudinal track can be replaced later with new recordings through audio dubbing.

CAUTION:
The hi-fi soundtrack recorded with the HR-S5000EG cannot be reproduced with video equipment other than Hi-Fi VHS.

Tape pattern recorded with HR-S5000EG



Hi-fi audio recording and reproduction are available only from the hi-fi audio track while the longitudinal audio track provides normal audio.

The hi-fi and normal soundtracks are recorded simultaneously, and audio dubbing is applicable only to the normal audio.

Recording options according to the selected input mode

Input mode \ Track	Video track	Normal audio track (mono)	Hi-fi audio track (2-channel)
TUNER SIMUL (button pressed to OFF)	TV picture (from built-in tuner)	**TV sound (from built-in tuner)**	**TV sound (from built-in tuner)**
SIMULCAST SIMUL (button pressed to ON)	TV picture (from built-in tuner)	**TV sound (from built-in tuner)**	Audio signal from AUDIO EING. (Mixing with microphone input is possible.)
AUX (Channel display section: AU)	Video signal from A/V1 EING./AUSG., A/V 2 EING. or S EING.	Audio signal from A/V1 EING./AUSG. or A/V2 EING. (Mixing with microphone input is possible.)	

Notes:
- To engage the AUX mode, press the "0" key of the 10-digit keypad.
- Microphone input will be mixed with the audio signals on the hi-fi audio track. Therefore, do not leave a microphone connected to the MIKROFON jack unless needed.
- You can record audio only (without recording any video signal) on the hi-fi audio track. This means you can record a continuous 8-hour FM programme onto a single cassette (E-240). For this purpose, press the SIMUL button so SIM lights on the FDP and connect an audio source, such as an FM tuner, to the AUDIO EING. connectors ㉔ . And tune the built-in tuner to a vacant channel.

Recording options according to the type of broadcasts and the setting of the 2-KANAL TON switch

Type of broadcast \ 2-KANAL TON switch position \ Audio Track		Normal audio track (mono	Hi-fi audio track (2-channel) L	Hi-fi audio track (2-channel) R
Regular (monaural audio)	Either position	Mono	Mono	Mono
Stereo broadcast	Either position	L + R mixed	Stereo	
Bilingual broadcast	HAUPT	Main soundtrack (local language)	Main soundtrack (local language)	Sub soundtrack (foreign language)
	NEBEN	Sub soundtrack (foreign language)		

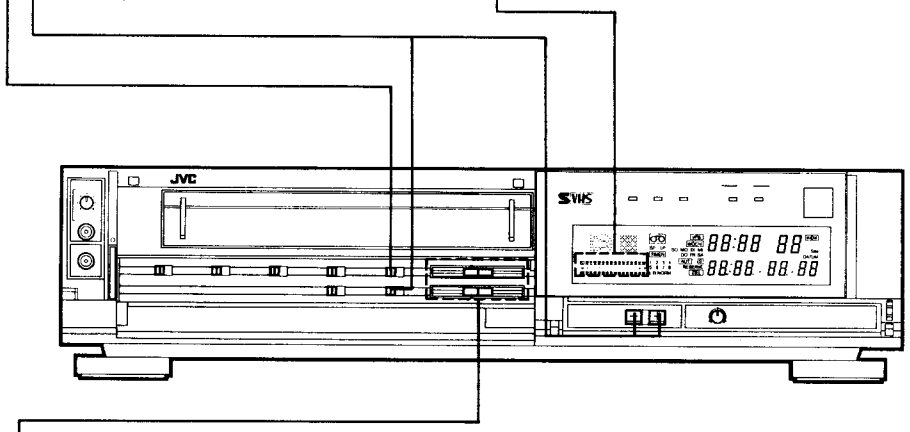
Hi-Fi audio recording level adjustment

While recording onto the normal audio track is controlled by the built-in Automatic Level Control circuit, hi-fi audio recording has two control options: manual and automatic.

AUDIO-BEGRENZER switch
Setting this switch to EIN activates the built-in audio limiter circuit for both channels so that the recording level is automatically controlled. For manual adjustment, set this switch to AUS. (The recording level for normal audio is always controlled automatically regardless of the setting of this switch.)

PEGELANZEIGE switch and SPURLAGE buttons
The right-channel audio level indicator also functions as a tracking meter during playback. If noise or breaks are sensed in the reproduced sound from the hi-fi audio track or noise bars are visible on the screen, attempt to correct using the SPURLAGE buttons while referring to the meter. For this purpose, set this switch to Hi-Fi SPURLAGE and press the buttons so that the greatest number of elements of the right-channel indicator light. When this switch is set to AUS, the indicators do not light, regardless of whether during recording or playback.
Note:
When playing back a tape with no recording on the hi-fi audio track, the level indicator does not light when the PEGELANZEIGE switch is set to Hi-Fi SPURLAGE.

Audio level indicators
For manual control of the recording level, first set the relevant switches as follows:
AUDIO-BEGRENZER ⓯ → AUS
PEGELANZEIGE ⓴ → EIN
AUDIO MONITOR ⓰ → L and R (Hi-Fi Stereo)
Then slide the Hi-Fi AUFN. controls referring to these indicators. When indicators up to or near 0 dB light for the loudest signal being applied, the recording level is optimum. (The level at which only one red indicator lights from time to time may be most appropriate.)
During playback, these indicators show the level of audio signals recorded on the tape.
These indicators do not light when the PEGELANZEIGE switch is in the AUS position.
Notes:
- With the AUDIO MONITOR and AUDIO MIX buttons pressed so either L, R or NORM lights on the FDP, the recording level of hi-fi audio signals cannot be correctly indicated. Select the L and R indication when adjusting the recording level.
- The normal audio signal level is also displayed by these indicators, but cannot be adjusted.



Hi-Fi AUFN. controls
Slide these controls, the upper for left channel and the lower for right channel, for manual adjustment of the hi-fi audio recording level.

Note:
When a microphone is connected to the MIKROFON jack, set the AUDIO-BEGRENZER switch to the EIN position to protect against over-level input signals from the microphone.

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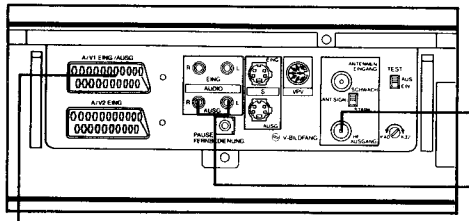
Dual-audio playback flexibility

Two different types of audio tracks (hi-fi and normal) allow a variety of playback options depending on the connection and the settings of relevant controls and switches.

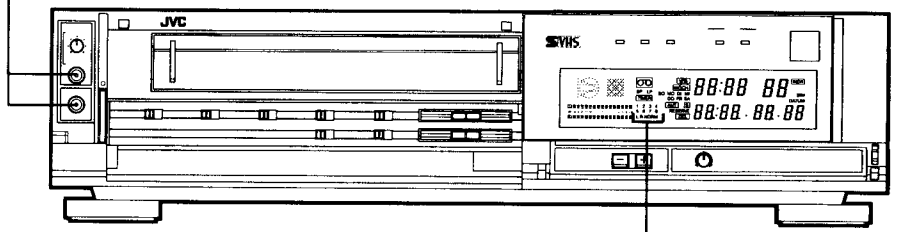


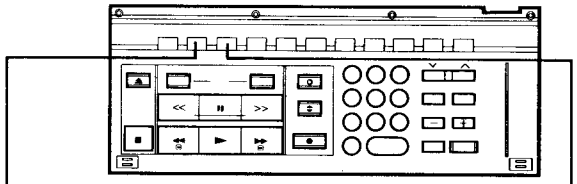
A/V1 EING./AUSG.
Delivers audio (both hi-fi and normal) and video signals.

HF AUSGANG connector
Delivers audio (both hi-fi and normal) and video signals to a TV receiver. When the recorder is not used, the aerial signal is supplied from this connector to the TV receiver to allow regular TV viewing; when a video tape is played back through the HF AUSGANG connector, the audio is reproduced always as monaural; with hi-fi stereo tapes, both channels are mixed. Therefore, for stereo playback, connect a stereo system to the AUDIO AUSG. connectors or a stereo television to the A/V1 EING./AUSG. socket. Refer to page 40.

AUDIO AUSG. connectors
Delivers the audio signals from both hi-fi and normal audio tracks.

KOPFHÖRER jack and KOPFHÖRER PEGEL control
Delivers the audio signals from both hi-fi and normal audio tracks. The headphone output level is adjustable with the KOPFHÖRER PEGEL control.





Audio monitor indicators (L, R, NORM)

AUDIO MONITOR button
Selects the hi-fi audio channel (left, right or both) for listening. Use this button together with the AUDIO MIX button referring to the three LED indicators (L, R and NORM) on the FDP.
- When the power is turned on, the L and R indicators light and both hi-fi stereo soundtracks can be listened to. Press this button and only the L indicator lights to listen to only the left hi-fi channel sound.
- Press this button again and only the R indicator lights to listen to only the right hi-fi channel sound.

Notes:
- This button functions during recording as well, although it has no effect on the recorded signal.
- With the AUDIO MIX button pressed for the NORM setting, pressing the AUDIO MONITOR button has no effect.

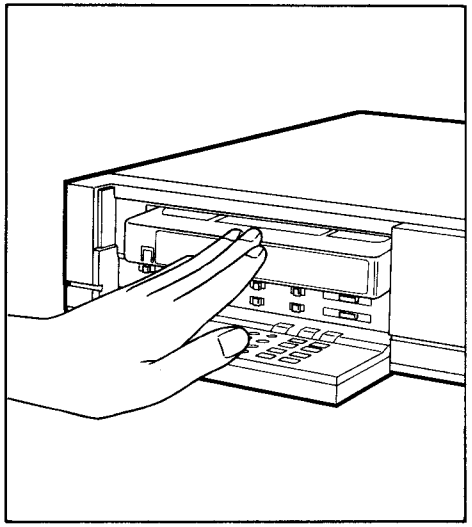
AUDIO MIX button
Operates in conjunction with the AUDIO MONITOR button to select sound tracks for listening.
- When the power is turned on, both hi-fi stereo soundtracks can be listened to. Press this button once to listen to only the normal soundtrack (the NORM indicator lights).
- Press this button again to listen to a mixture of hi-fi stereo (L and/or R) and normal soundtracks, by selecting the combination with the AUDIO MONITOR button.

Notes:
- This button functions during recording as well, although it has no effect on the recorded signal.
- When playing back a tape containing the same soundtrack on both hi-fi and normal audio tracks, a slight time lag is sensed between the two soundtracks, probably with some distortion when listening in the Mix mode.

LOADING AND UNLOADING A CASSETTE

Loading

Insert a cassette as illustrated. Be sure to insert if firmly into the slot; otherwise, it will be automatically ejected.



- The automatic loading mechanism will operate only when the cassette is inserted correctly.
- With either a VHS or S-VHS cassette inserted, the "cassette loaded" indicator will appear on the FDP. When an S-VHS cassette is loaded, the S-VHS KASS. indicator also lights.

Unlaoding

Press the KASSETTE button ㉔ .

CAUTION
- If unloading of the cassette is not possible, check to see whether the TIMER indicator is lit. If so, press the SCHALTUHR button so the TIMER indicator extinguishes.
- Do not attempt to pull out the cassette once automatic loading has started.
- Do not insert fingers or any foreign object beyond the door of the cassette loading slot, as this could lead to injury or damage to the mechanism. Show special caution with children.

AUTO POWER-ON AND AUTO PLAY SYSTEM
- The cassette can be loaded even when the power has not been turned on. Inserting a cassette into the loading slot turns the power on automatically.
- Inserting a cassette, with its safety tab removed, turns the recorder on and playback of the cassette begins automatically.

POWER-OFF EJECT SYSTEM
- The cassette can be unloaded even after the power has been turned off. Pressing the KASSETTE button turns the power on automatically and, after ejection of the cassette, shuts it off automatically.

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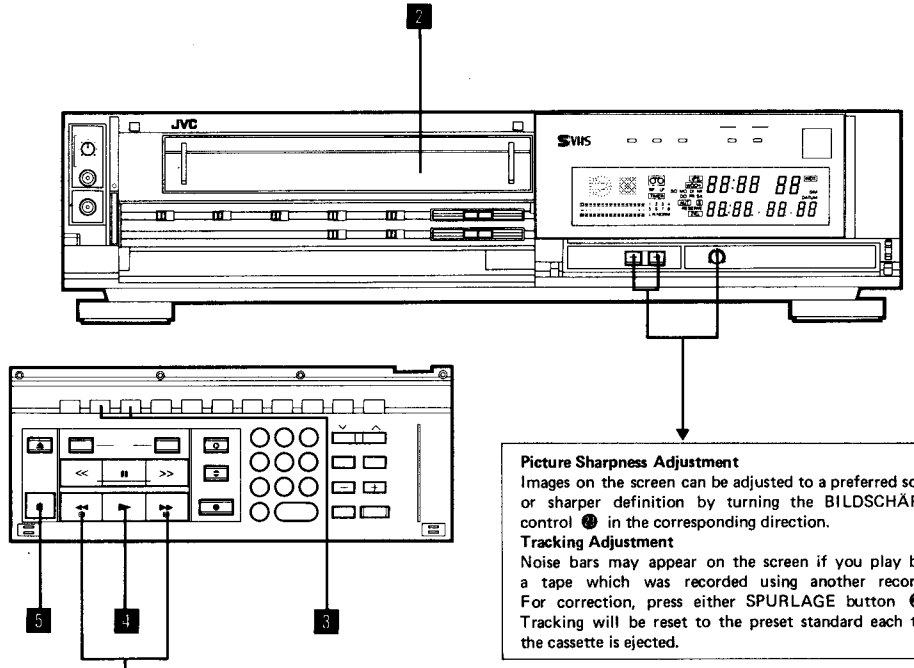
PLAYING BACK A VIDEO CASSETTE



1. Turn the TV receiver on and set it as required. (See pages 39 and 40.)
2. Load a pre-recorded cassette.
   - Power will be switched on automatically.
   - When the cassette loaded has no safety tab, playback will start automatically.
3. Make the AUDIO MONITOR ㉘ and AUDIO MIX ㉗ setting as required. (See page 47.)
4. Press WIEDERGABE/X2 ㊾ .
5. Press STOP ㉒ at the end of the programme.
   - The tape will be rewound automatically when its end is reached and the recorder will enter the Stop mode.

Notes:
- The SP or LP mode recording is automatically detected and played back at the correct speed.
- Irrespective of the S-VHS mode button setting, the S-VHS or VHS recording mode is automatically detected and played back in the correct mode. The S-VHS mode indicator lights for playback of S-VHS recordings.

Picture Sharpness Adjustment
Images on the screen can be adjusted to a preferred softer or sharper definition by turning the BILDSCHÄRFE control ㉙ in the corresponding direction.

Tracking Adjustment
Noise bars may appear on the screen if you play back a tape which was recorded using another recorder. For correction, press either SPURLAGE button ㉜ . Tracking will be reset to the preset standard each time the cassette is ejected.

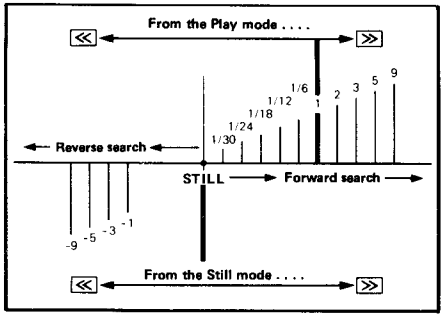
SHUTTLE SEARCH
Shuttle Search allows high-speed playback at 9 times normal speed in either direction.
1. Press either RÜCKLAUF or VORLAUF Shuttle Search ㉛ or ㉝ during playback.
2. To cancel the Search mode, press WIEDERGABE/X2.
   - For briefer scanning, keep the Shuttle Search button pressed for more than 2 seconds; when you release the button, the Search mode will be cancelled.

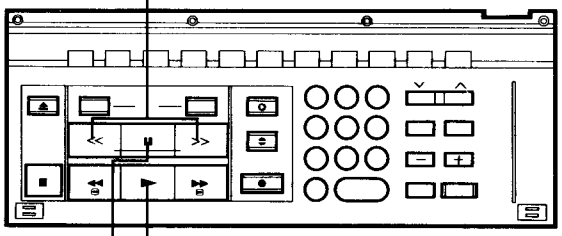
SPECIAL-EFFECTS PLAYBACK

Variable search (VARI-SUCHLAUF, ≪ and ≫ ⑨ or ⑰)

Variable speed search is possible in either forward or reverse direction from either the Still or Play mode.

- To search in the forward direction:
  - Press the ≫ button in the Play mode to start fast-motion searching from 2 times normal speed. To increase speed (to 3, 5, 9 times normal), press ≫ repeatedly.
  - Press the ≫ button in the Still mode to start slow-motion searching from 1/30 normal speed. To increase speed (to 1/24, 1/18, 1/12, 1/6, normal, X2, X3, X5, X9), press ≫ repeatedly. To decrease speed, press ≪ repeatedly. (Pressing the ≪ button in the Play mode, starts slow-motion searching at 1/6 normal speed.)
- To search in the reverse direction:
  - Press the ≪ button in the Still mode to start searching in the reverse direction at the same speed as normal speed playback. To increase speed (to -3, -5, -9 times normal), press ≪ repeatedly. To decrease speed, press ≫ repeatedly.
- To return to the normal Play mode, press the WIEDERGABE/X2 button.





Notes:

- No audio is available during any Special-effects playback mode.
- If noise bars are visible, use the SPURLAGE control buttons as described on the previous page.

STILL PICTURE

1. Press PAUSE/STANDB. ⑱ during playback.
2. To advance the still picture, press PAUSE/STANDB. a number of times.
3. To cancel the Still mode, press WIEDERGABE/X2.

Notes:

- When the Still mode continues for longer than about 5 minutes, the Stop mode will be entered automatically.
- With some televisions, the still picture may be unstable. This is not due to any defect of the unit. If vertical vibration of the picture is observed, attempt to correct it by turning the V-BILDFANG control on the rear of the video recorder.

DOUBLE-SPEED PLAYBACK

- Press WIEDERGABE/X2 ⑱ while in the Play mode; double-speed playback will be engaged.
- To resume normal playback, press the same button again.

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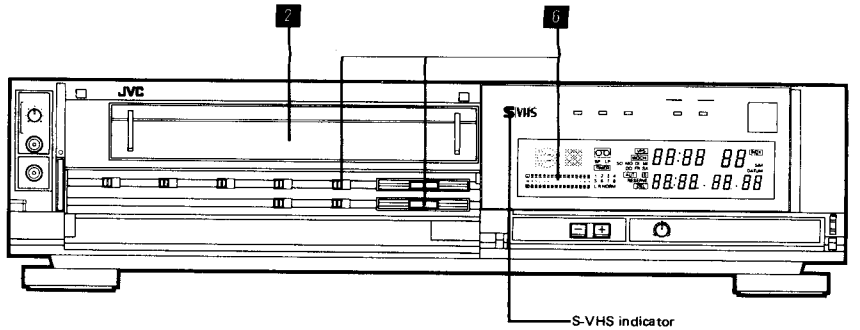
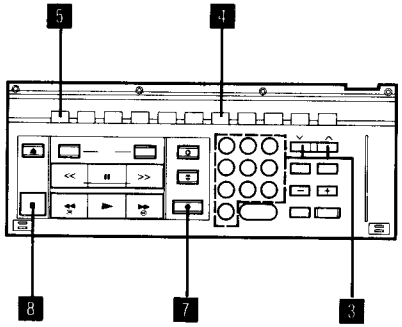
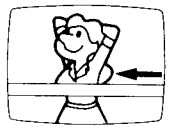
BASIC OPERATION FOR RECORDING TV PROGRAMMES





Pause mode indicator



1 Turn the TV receiver on and set it as required.

2 Load a cassette (with safety tab in place).
- Power will be switched on automatically.

3 Press either KANAL (∨ / ∧) button ㉚ or the numeric keys ⑬ to select the channel you wish to record.

4 Select the recording speed with SP/LP button ㉛
SP: 4 hours with an E-240 cassette.
LP: 8 hours with an E-240 cassette. (Check the SP/LP indicator on the FDP.)

5 For S-VHS recording, press S-VHS button ㉙ so that the S-VHS indicator ⑤ will light.

6 Make Hi-Fi audio recording level adjustment as required. Refer to page 46.
- For automatic level adjustment, simply set the AUDIO-BEGRENZER switch ㉖ to EIN.

7 Press AUFN./DA ⑮ to start recording.
- Be careful to press AUFN./DA only once, or Instant Timer Recording will begin.
- Press (●) ⑯ and (► /X2) ㉘ simultaneously when using the remote control unit.
- If there is part of the programme you do not want to record, press PAUSE/STANDB. ⑱ . A white horizontal bar will appear on the screen, which reduces in size in 4 steps as time elapses. When the last quarter starts blinking and disappears, the Stop mode will be entered automatically. The pause duration is possible for about 5 minutes.
- To continue recording from the Pause mode, press WIEDERGABE/X2 while the white bar is on-screen.

8 Press STOP ⑰ at the end of the programme.
- When the end of the tape is reached during recording, the tape is automatically rewound and stops.

INSTANT RECORDING

If you wish for recording to stop automatically after a certain period of time, use this Instant Timer Recording mode.

1. Press AUFN./DA during recording (or twice if in the Stop mode).
   - Recording will begin and the FDP shows " AUT 0:30", indicating that recording will automatically stop and power will switch off after 30 minutes.
2. Ajust the switch-off timer, if necessary.
   - Press AUFN./DA to increase the time in 30-minute increments (possible up to 4 hours).
   - Use the numerick keys to set to a more precise time when required (possible up to 8 hours 59 mintes). Always key in a full number including hours and minutes. For "0:35", key in zero first. After setting the time, press AUFN./DA immediately.

Notes:

- When recording is restarted from the Pause mode, assemble recording is performed so that the playback picture will not distort at the edit point.
- The selected channel cannot be altered during recording. If you wish to change the channel, first engage the Pause mode and then select a different channel.

OTHER RECORDING POSSIBILITIES

RECORDING A TV PROGRAMME WHILE WATCHING ANOTHER

A programme not being viewed can be recorded while you enjoy another programme. This permits the recorded programme to be played back later at your convenience.
The recording procedure is exactly the same as described on the previous page. The points to be remembered are:

- Select the channel you wish to record with the recorder's channel select buttons.
- Select the channel you wish to view with the TV receiver's channel selector.

RECORDING STEREO TV PROGRAMMES

(Applicable only to the West German Sound-Multiplex TV system)

If stereo TV programmes are broadcast in your area, the HR-S5000EG automatically receives them in stereo. When a stereo programme is being received, the STEREO indicator ⑦ lights and recording is made in stereo on the hi-fi audio track and in mono (mixed L + R) on the normal audio track. To listen to the stereo soundtrack during recording, press the AUDIO MONITOR button ㉕ so that L and R light. If this button is left pressed for either L or R, you will hear only one channel while recording, though the recording is being made in stereo.

RECORDING BILINGUAL TV PROGRAMMES

(Applicable only to the West German Sound-Multiplex TV system)

When a bilingual TV programme is being received, the 2-TON indicator ⑧ lights. There is a switch to select the soundtrack to be recorded on the normal audio track, however, because both soundtracks are recorded always on the hi-fi track for selective listening, you can ignore the switch labelled 2-KANAL TON ⑱ in most cases unless you need a specific soundtrack on the normal audio track.

- Set 2-KANAL TON switch ⑮ to HAUPT to record the main soundtrack (local language), to NEBEN to record the sub soundtrack (foreign language).
- To listen to the selected soundtrack from the hi-fi audio track while recording, press the AUDIO MONITOR button for either L or R.
- To listen to the soundtrack being recorded on the normal audio track, press the AUDIO MIX button ㉗ for NORM.

RECORDING FM SIMULCAST TV PROGRAMMES

FM simulcast TV programmes can be recorded using an FM stereo tuner. Connect necessary components. (Connect the FM tuner to the rear panel AUDIO EING. connectors.) Select the TV channel broadcasting the simulcast programme with the recorder's channel select buttons and tune the FM stereo tuner to the station broadcasting the soundtrack for this TV programme.
The only difference from the basic recording procedure is an additional step after step 5 on page 51.

- Press SIMUL button ㉘ .
  Then the SIM indicator will light. With this setting, the video and audio signals from the built-in tuner will be recorded on the video and normal audio track and the audio signal from the FM stereo tuner will be recorded on the hi-fi audio track.

Notes:

- After finishing recording, be sure to press the SIMUL button to switch back to the Tuner.
- While recording simulcast programmes, it might happen that the hi-fi sound distorts momentarily at switching points between different programmes. This is not due to any defect of the unit.

RECORDING A TV PROGRAMME WHILE RECORDING AN INDEPENDENT AUDIO SOURCE

Using the "simulcast" recording function, you can record independent audio and video programmes, because the TV soundtrack is not lost, but recorded on the normal audio track. While recording a TV programme, record any audio source independently.

- Connect an audio component (such as an FM tuner) to the AUDIO EING. connectors ㉙ .
- Press SIMUL button. The SIM indicator on the FDP will light.

Notes:

- If you stop recording to avoid unwanted material of the TV programme using the PAUSE/STANDB. button, the audio programme from an external source is also cut.
- If television broadcasting comes to an end during recording, the hi-fi sound being recorded from an external source may distort. It is recommended that you check the timetable of TV broadcasts in advance.
- After finishing recording, be sure to press the SIMUL button to switch back to the Tuner; otherwise recording on the hi-fi audio track from the built-in tuner will not be possible.

USING THE HR-S5000EG AS AN AUDIO TAPE DECK

You can record audio only (without recording any video signal) on the hi-fi audio track. This means you can record a continuous 8-hour FM programme onto a single cassette (E-240).

- Connect an audio source (such as an FM tuner) to the AUDIO EING. connectors.
- Tune the built-in tuner to a vacant channel.
- Press SIMUL button. The SIM indicator on the FDP will light.

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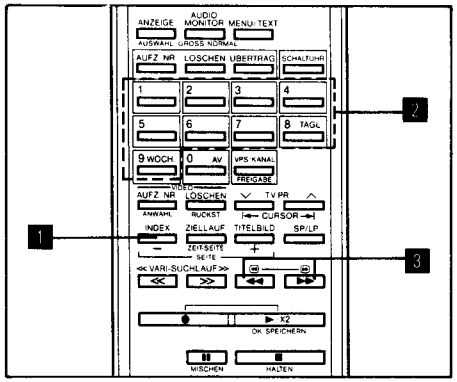
INDEX SEARCH FUNCTION

The Index Search function gives you automatic access to locations on the tape where index codes are recorded. Index codes are recorded automatically at the beginning of recordings which are started from the Stop or Timer Standby mode, or recorded manually at any other position during recording or playback. Unnecessary codes can be erased manually during playback. In neither case is there any effect on the audio or video recordings on the tape. With the HR-S5000EG, you can access any one of up to 9 of these indexed segments in either the forward or reverse direction.

Using the Index Search function



1 Press INDEX ㉔ while in the Play or Stop mode.
- The channel display on the FDP will change to the Index Search mode and the "INDX" indicator will light.

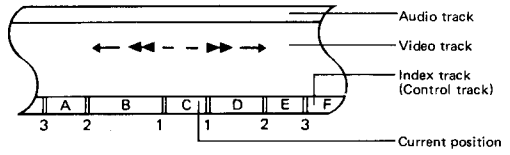
2 Specify the index number using one of the numeric keys ⑯ (1 – 9) within 10 seconds.
- The specified number will appear on the FDP.

3 Press either ◀◀ or ▶▶ ㉖ .
- The tape will move and the index numbers count down to 0, where normal playback will start.
- If the INDEX button was pressed in the Play mode, the screen shows search pictures; if the button was pressed in the Stop mode, the index codes are detected in the much faster Rewind or Fast-Forward mode.

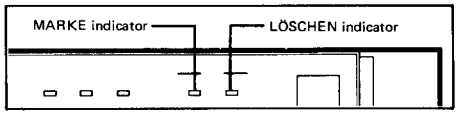
Notes:

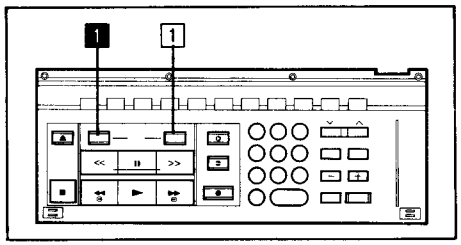
- To cancel the Index Search mode before completion, press (▶ /X2) ㉒ or (■) ㉑ .
- If the end of the tape is reached while still in the Index Search mode, the mode is cancelled and the tape rewound.

Tips for specifying the index number



- "1" + ▶▶ moves playback to the beginning of segment D.
- "1" + ◀◀ moves playback to the beginning of segment C.
- "2" + ◀◀ moves playback to the beginning of segment B.
- If no number is entered, a value of "1" is assumed.





Marking extra index codes

1 Press INDEX MARKE ㉚ while in the Record or Play mode.
- An index code will be recorded on the tape.
- The MARKE indicator ⑩ will blink while the index code is being recorded.

Erasing index codes

1 Press INDEX LÖSCHEN ㉛ while in the Play mode.
- First the Shuttle Search mode will be engaged and, when an index code is detected, it will be erased automatically. Then the Erase mode will be cancelled and playback resumes.
- The LÖSCHEN indicator ⑪ remains lit during the searching process and blinks while the code is being erased.

Notes:

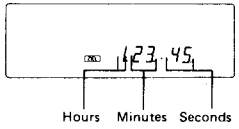
- Index codes cannot be added or erased on a tape with its safety tab removed.
- While the index code is being searched for in the Erase mode, random noise appears on the screen.
- Audio is muted in both the Mark and the Erase modes.
- Marking index codes is not possible while audio dubbing or insert editing is being performed.

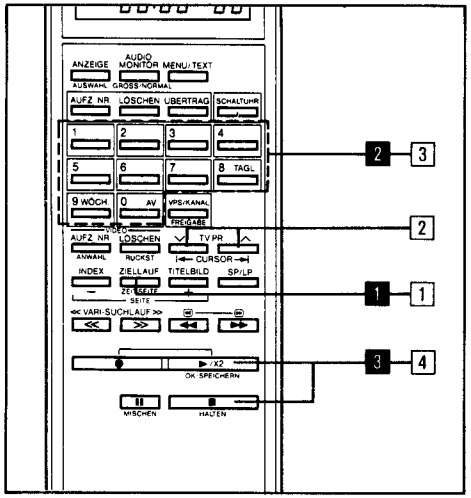
REALTIME TAPE COUNTER FUNCTIONS

Unlike usual tape counters which show tape locations in numbers, this realtime tape counter shows tape time precisely in hours, minutes and seconds in all modes (Record, Play, Rewind, Fast Forward).

Time Go-to function

The Time Go-To function gives you direct access to any point on the tape by simply specifying the time from the beginning of the tape.





1 Press ZIELLAUF ⑱ while in the Play, Stop or Still mode.
- The counter will change to the Go-To mode.

2 Specify the time (from the beginning of the tape) to the point to be located, by using the numeric keys ⑰ .
- Always key in a full number.

3 Press (► /X2) ㉒ or (■) ⑯ .
- Depending on the situation, search will take place either in the Shuttle Search mode or in the Rewind or Fast Forward mode which is much faster than the Shuttle Search mode. After the specified point is reached, playback starts automatically or the tape stops automatically depending on the command.

Pressing ► /X2 from Play or Still mode:	Shuttle Search→Automatic start of playback
Pressing ► /X2 from Stop mode:	REW or FF→Automatic start of playback
Pressing ■ from Play, Still or Stop mode:	REW or FF→Automatic stop

- If the recorder did not detect the leader tape when the cassette was loaded (indicated by "-St--m--s" when the Go-To button is pressed), the tape is first rewound to the beginning of the tape and then is fast-forwarded to the specified point.

Time Search function

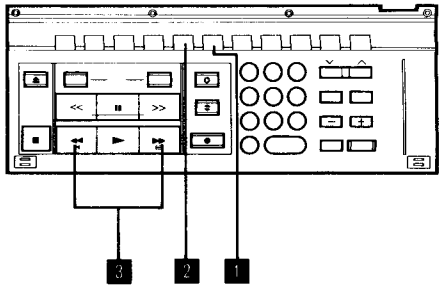
The Time Search function lets you locate a point on the tape a specified time span away from the current position in either direction.

1 Press ZIELLAUF ⑱ while in the Play, Stop or Still mode.
2 Press TV PR. "∨" or "∧" ㉑ to specify the direction of search.
3 Specify the time (from the current position) to the point to be located, by using the numeric keys ⑰ .
4 Press (► /X2) or (■).
- The tape will move to the specified point and automatically start playback or stop.

Notes:
- Each step in the operation procedure must be followed by the next within 60 seconds, otherwise the Go-To or Search mode will be cancelled.
- If the GO-TO button is pressed while in the Play or Still mode, a still picture can be obtained when the specified point is reached, if you press the (❚❚) button instead of the (►) or (■) button after keying in the time.
- Use of other control buttons, while in either the Time Go-To or Search mode, cancels that mode.
- If the specified time exceeds the tape length, the tape fast forwards to the end and then rewinds to the beginning and stops.

ENGLISH

COUNTER MEMORY FUNCTION/LAP TIME INDICATION



Counter Memory function

1 Press ZÄHLWERK-RÜCKST. ⑲ at a point which you may wish to locate later.
- The counter will read "0St 00m 00s".

2 Press ZÄHLWERK-SPEICHER ㉔ . [S] will appear on the FDP.

3 Press RÜCKLAUF (or VORLAUF) ⑳ (or ⑮) when you need to return to the designated point.
The tape will rewind (or fast forward) and stop at about the "0St 00m 00s" counter reading automatically.

Lap Time Indication

When you need to know the exact time of a recording, press the ZÄHLWERK-RÜCKST. button before starting recording or playback. The counter will be reset to "0St 00m 00s" and show the exact elapsed time as the tape runs.

REMAINING TAPE TIME INDICATOR

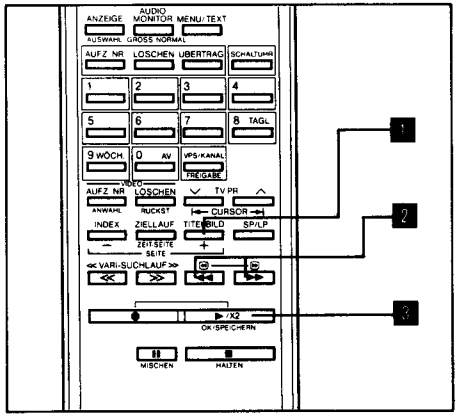
The tape counter is switchable to the remaining tape time indicator.

1. Press ANZEIGE ⑫ or ⑬ to obtain the Remain mode (RESERVE).
2. The remaining length will be shown in hours and minutes.

Notes:
- During recording, the remaining tape length is calculated in reference to the recording mode selected by the SP/LP button; during playback, it is calculated in reference to the recording mode of the tape being played (SP/LP).
- The indicated remaining time is approximate. The time required to calculate the remaining tape length and the accuracy of that calculation may vary according to the type of cassette tape. (The remaining time indication is not available if this mode is engaged from Fast Forward or Rewind.)

INTRO SEARCH FUNCTION

The Intro Search function lets you visually check the contents of each recording by playing back in fast motion a short segment of a programme each time an index code is detected.



1 Press TITELBILD ⑭ while in the Play or Stop mode.
- The INDX indicator on the FDP will light.

2 Press the (►►) or (◄◄) button ⑮ within 2 seconds.
- The Intro Search will start in the corresponding direction.
- Each time an index code is detected, the corresponding part is played back at the search speed (9 times normal) for about 5 seconds.

3 When you find the section you want to view, simply press the (► /X2) button ⑯ .
- Normal playback will start.

NEXT-FUNCTION MEMORY

Memory Play function

- If you want to watch the tape from its beginning after rewinding, press the RÜCKLAUF button and then WIEDERGABE/X2 within 2 seconds. Playback will start automatically at the beginning of the tape. (Check to see that the counter memory indicator [S] is off.)
  If you want to watch the tape from the counter reading of "0St 00m 00s" press the ZÄHLWERK-SPEICHER button to obtain [S] . Then, press the RÜCKLAUF (or VORLAUF) button and then WIEDERGABE/X2.
- While the tape is being rewound, the indicator (PLAY) is blinking. To cancel the Memory Play mode and go to another mode, press the corresponding button (STOP, WIEDERGABE/X2, VORLAUF, RÜCKLAUF).

Memory Eject/Power-Off/Timer Standby

If you are going to eject the cassette, turn the power off or engage the timer Standby mode after rewinding the tape, you do not have to wait for completion of rewind to press the corresponding button.

- To eject the cassette after rewind, press RÜCKLAUF and then KASSETTE within 2 seconds. (To cancel the Memory Eject mode, press STOP.)
- To turn the power off after rewind, press RÜCKLAUF and then BETRIEB within 2 seconds. (To cancel the Memory Power-off mode, press BETRIEB.)
- To engage the Timer Standby mode after rewind, press RÜCKLAUF and then SCHALTUHR within 2 seconds. (To cancel the Memory Timer Standby mode, press SCHALTUHR.)

Memory Play	RÜCKLAUF/ VORLAUF	WIEDERG./X2	Blinking	→	Play mode
Memory Eject	RÜCKLAUF	KASSETTE	Blinking	→	Cassette ejected
Memory Power-off	RÜCKLAUF	BETRIEB	Blinking	→	Power off
Memory Timer Standby	RÜCKLAUF	SCHALTUHR	[TIMER] Lights	→	Timer standby mode

within 2 seconds

AUDIO DUBBING

Audio dubbing means recording a new soundtrack on a pre-recorded tape. In other words, the previously recorded sound is erased and replaced with a new soundtrack. **Audio dubbing is applicable only to the longitudinal audio track (normal audio).** Therefore, a dubbed narration can be heard together with the original hi-fi sound.

1. Switch on the TV receiver and set it as required. (See pages 39 and 40.)
2. Load a pre-recorded cassette. Power will be switched on automatically.
3. Connect a microphone or an audio source to the MIKROFON jack ⑯ or the A/V2 EING. socket ⑰ respectively.
   - With both microphone and audio source connected, mixed sound is recorded.
4. Press "0" of the numeric keys ⑬ , and set the EINGANGSWAHL switch to AV2.
   - If you record sound only from the microphone, the source equipment connected to the A/V2 EING. socket should be off.
5. Press WIEDERGABE/X2 ⑭ to start playback and then press RÜCKLAUF or VORLAUF ⑱ or ⑰ to search for the point from which you wish to start audio dubbing.
6. Press PAUSE/STANDB. ⑮ at the start-point of audio dubbing.
7. Press VERTONUNG ⑰ .
8. Press WIEDERGABE/X2.
   - Audio dubbing will start.

Notes:

- It is recommended that you use a lower-impedance microphone.
- If whistling or howling is heard during audio dubbing, reduce the TV volume or move the microphone farther away from the TV. Recording is being performed even if sound is not heard from the TV receiver. If you want to monitor the sound being recorded, connect headphones to the KOPFHÖRER jack.
- When a microphone is connected to the MIKROFON jack, set the AUDIO-BEGRENZER switch to the EIN position.

CAUTION:
Audio dubbing is not possible with an audio source connected to the rear panel AUDIO EING. connectors.

ENGLISH

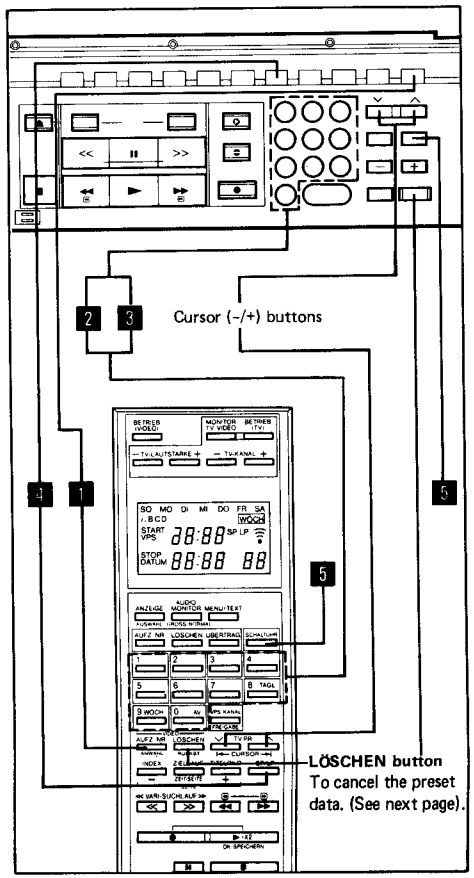
AUTOMATIC TIMER RECORDING

First of all, load a cassette (with safety tab in place); power will be switched on automatically.

Three ways to perform timer programming

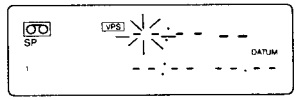
- **A. Local programming:** Programme the timer using the recorder's controls while referring to the recorder's FDP.
- **B. Direct remote programming:** Programme the timer using the remote control's keys while referring to the recorder's FDP.
- **C. Independent remote programming:** Programme the remote control's memory using the remote control's keys while referring to its own LCD and then transfer the data to the recorder.

Note:
The timer can also be programmed by using the Teletext function. Refer to the "Handy Teletext & VPV Operation Guide" accompanying this instruction manaul for Teletext timer programming.

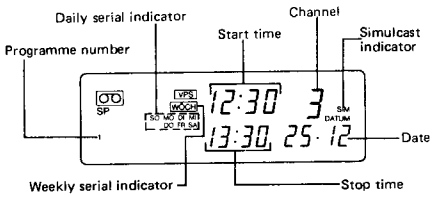


A. Local Programming

1. Press AUFZ. NR. 35 .
   - The display will change to the Timer Set mode for programme number "1". To advance to programme numbers 2 – 8, press AUFZ. NR.



2. Enter the start time using numeric keys ⑬ .
   - Invalid numbers will be rejected.
   - To key in a one-digit number of hours or minutes, first press "0". Then press the relevant numeric key.
3. When the display changes to the next stage, key in the stop time, date and channel in succession using numeric keys.
   - To record a daily serial starting on the day of setting, press VOR "∧" ㉘ without entering any date figure.
   - To record a daily serial starting on a certain day, press [8] and enter the date.
   - To record a weekly serial, press [9] and enter the date.
   - For keying in channel numbers, refer to page 43.
   - For programming the timer to record an external source, press the numeric key "0" while the channel display is blinking; "AU" will appear on the FDP.
   - For programming the timer to record an FM simulcast programme, press the SIMUL button on the recorder at any stage while programming; "SIM" will appear on the FDP.



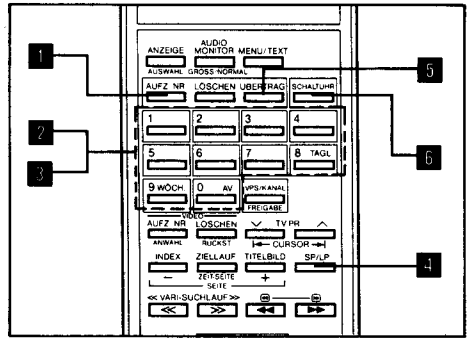
   - When not using the VPS recording system, press KANAL/VPS ㉑ to make "VPS" disappear on the FDP.
4. Press SP/LP ㉑ to obtain the desired recording mode indication on the display.
   - The SP or LP entry can be made anytime while in the Timer Set mode.
5. After making sure that the cassette is loaded, press SCHALTUHR ㉚ .
   - The Timer Recording Standby mode will be engaged with the TIMER indicator and the preset programme number(s) illuminated and the power turned off.
   - With no cassette loaded, the TIMER and "cassette loaded" indicators will continue blinking.
   - A cassette whose safety tab has been removed will be ejected automatically.
   - If a preset programme contains errors, that programme number will not be illuminated. Recheck the programmed data.

B. Direct Remote Programming

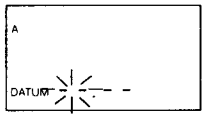
Following the procedures above, use the remote control's buttons instead of the recorder's with the remote control directed toward the recorder's Remote Sensor window ㉙ .

C. Independent Remote Programming

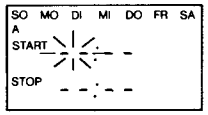
- The remote control incorporates 4 programme memories (A, B, C and D).
- The programmed data is held in memory even after it has been transferred to the recorder.



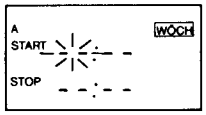
1 Press AUFZ. NR. ⑯ .
- The LCD will be activated for programme memory "A".
- To advance to programmes B to D, press again.



2 Enter the date using numeric keys ⑰ .
- Setting for a daily or weekly serial is the same as described in "A. Local Programming".

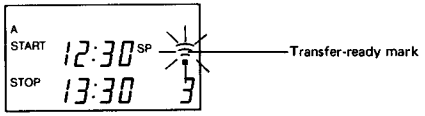


For daily serial setting



For weekly serial setting

3 When the display changes to the next stage, enter the start time, stop time and channel in succession.
- For programming the timer to record an external source, press the numeric key "0" while the channel is blinking; "0" will appear on the LCD and when transferred in step 4 , "AU" will appear in the channel display section on the FDP.
- After the channel has been entered, the transfer-ready mark will appear and blink.



- When not using the VPS recording system, press VPS/KANAL to make "VPS" disappear.

4 Press SP/LP ⑱ to obtain the desired recording mode indication on the display.
- The SP or LP entry can be made anytime while in the Timer Set mode.

5 Direct the remote control to the recorder's Remote Sensor window ⑭ and press ÜBERTRAG ⑰ .
- *The programmed data will be loaded in one of the* recorder's memories (1 – 8), the vacant one of the smallest programme number.
- If all programme memories are full, the recorder's clock will blink and transference will not take place.
- Call up the programme(s) to be cancelled by pressing VIDEO AUFZ. NR. ⑭ , then press VIDEO LÖSCHEN ⑮ to cancel it. Data transfer can now be made by pressing ÜBERTRAG again.

6 Press SCHALTUHR ⑱ .
- Check to see that the TIMER indicator and other items on the recorder's FDP respond correctly. (See page 57.)

Setting the date, start and stop times, and channel

- It is not possible to set the date, start and stop times unless the date and clock have previously been set.
- Enter the date while the digits are blinking.
- Unless the start time has been properly set, stop time setting is not possible.
- The stop time can be set within 24 hours from the start time.
- Non-applicable numbers (such as January 32, February 30 for dates, 24 or larger for hours, 60 or larger for minutes and 49 or larger for channels) will be rejected when keyed in.

Cancelling the preset data

- The preset programmes can be cancelled. First engage the Timer Set mode for the programme number you wish to cancel and then press the LÖSCHEN/ÜBERSPRINGEN button ⑰ or VIDEO LÖSCHEN ⑮ . Or for the remote control's memory, press LÖSCHEN ⑰ .
- Unless the VPS mode is engaged, an executed programme is automatically cleared.

Checking the programmed data

- Checking and re-programming can be performed anytime, even when the SCHALTUHR button has already been engaged.
- While recording is actually taking place according to one preset programme, all other preset programmes can be checked or re-programmed.
- To disengage the Timer Set mode, press the ANZEIGE button ⑱ (on the recorder) or the ANZEIGE button ⑭ (on the remote control).

Timer recording operation

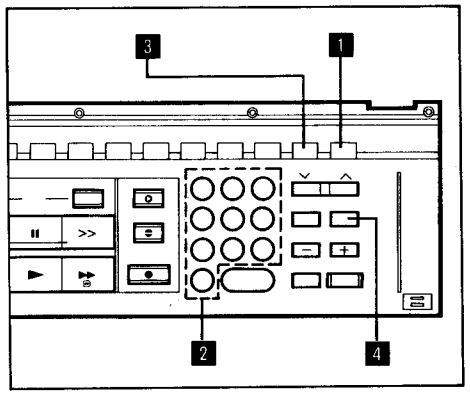
- When the preset start time is reached, recording starts.
- After timer recording, the power is switched off. If the tape end is reached during timer recording, the cassette is automatically ejected and the power is switched off.

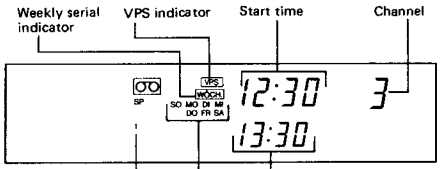
How to use the cursor keys ⑰ ⑱
- If you press a wrong key and the flashing position has advanced, press ZURÜCK to return to the previous position for correction.
- Once all data have been programmed, you can reach any position for correction using ZURÜCK or VOR. The flashing position is ready for re-entry.
- Pressing AUFZ. NR. on the recorder or VIDEO AUFZ. NR. on the remote control engages the FDP in the check mode in which no position flashes and data correction is not possible. Pressing AUFZ. NR. on the remote control engages the LCD in the transfer-ready mode in which the transfer-ready mark is flashing and data correction is not possible. For correction of data, press either cursor key to move to the position which requires correction.

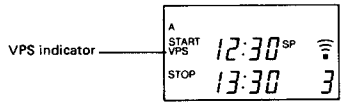
ENGLISH

VPS RECORDING

In the VPS (Video Programme System) system, TV stations transmit different VPS codes for different TV programmes, which control the starting and stopping of the video recorder and have precedence over times preset in the timer for accurate recording of a particular programme from start to finish.







1 Press AUFZ.NR. ⑭ (or VIDEO AUFZ. NR. ⑮) or, for the remote control's memory ⑰ .
2 Set the date, start time, stop time and channel in the same way as for timer programming.
3 Press KANAL/VPS ⑰ or VPS/KANAL ⑱ .
- All timer data will be converted to VPS codes and stored in memory.

4 Press SCHALTUHR ⑱ , or ⑰
- The recorder will enter the VPS standby mode at 20:00 on the day previous to the preset day and remain engaged until 3.59 on the following day, if the intended programme has not yet been broadcast.
- When a VPS code corresponding to the intended TV programme is detected during the VPS standby mode recording will start. When the VPS code changes to another, recording will stop.
- When an interruption code is detected during VPS recording, the VPS standby mode is engaged and recording restarts when the regular VPS code is restored.

Notes:
- When not using the VPS recording system, press KANAL/VPS ⑰ to make "VPS" disappear on the FDP.
- Operation at the end of VPS recording is the same as with ordinary timer recording.

INSERT EDITING

Insert editing means recording a new scene into a section of pre-recorded tape so that a part of the original recording can be replaced with a new sequence without excessive picture distortion at edit-in and edit-out points. Thanks to the flying erase head, clean edits can be obtained. New video and audio signals to be inserted can come either from another video cassette recorder or the built-in tuner.

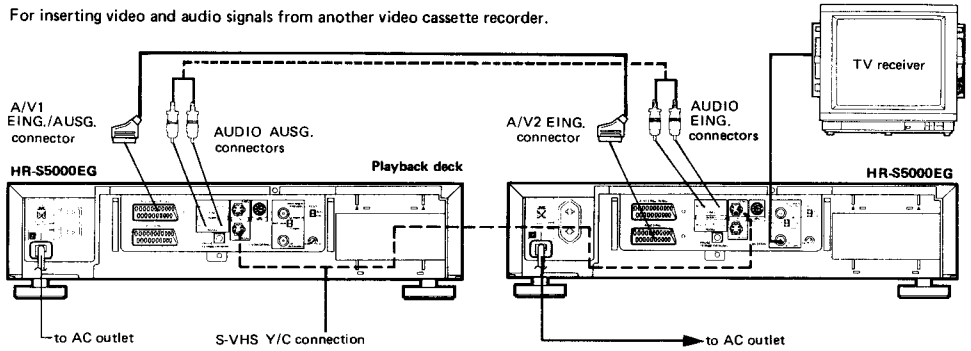
CAUTION
Since video and audio signals are recorded simultaneously, both are replaced with new recordings simultaneously. However, the normal audio soundtrack remains unchanged.

Setting options of the relevant controls

Source \ Settings	EINGANGS-WAHL switch and SIMUL button
To insert programmes from a different tape	AV2 or S (with S-VHS ⑦ set as required) (See page 36)
To insert TV programmes from the built-in tuner	Select a channel (SIMUL button pressed to OFF)
To insert FM simulcast programmes	SIMUL (button pressed to ON)

Connection

For inserting video and audio signals from another video cassette recorder.



Procedure

1. Switch on the TV receiver.
   - Set the TV receiver as required.
2. Load a pre-recorded cassette.
3. Set the EINGANGS-WAHL switch and press the SIMUL and S-VHS buttons as required. (See chart above.)
4. Set the Hi-Fi audio recording level. (See page 46.)
5. Play back the tape to determine the edit-out point (the end of the tape section to be replaced).
6. Press the PAUSE/STANDB. button ⑱ at the edit-out point.
7. Press the ZÄHLWERK-RÜCKST. button ㉑ .
   - The counter will be reset to "0St 00m 00s".
8. Press the RÜCKLAUF button ⑳ to determine the edit-in point (the beginning of the tape section to be replaced).
9. Press the PAUSE/STANDB. button ⑱ at the edit-in point.
10. Press the INSERT button ㉓ .
    - This engages the Insert Standby mode in which the input signal can be monitored on the TV screen; the still picture changes into the input signal that you are going to record.
    - The input sound signal can also be monitored.
11. Operate the source equipment properly.
    - Play back on another recorder the tape programme to be inserted.
    - Select the channel to be recorded.
    - Select the channel and set the FM tuner.
12. Press the WIEDERGABE/X2 button ⑲ to start insert editing.
    - Now video and audio signals will be recorded simultaneously.
    - At the counter reading of "0St 00m 00s", recording will stop automatically.
    - The tape will continue running in the Play mode.

Notes:

- Do not use the STOP button ⑫ to stop insert editing. If you press the STOP button, the tape stops and the Insert Edit mode is cancelled.
- If you wish to stop insert editing before the specified edit-out point is reached, press the ZÄHLWERK-RÜCKST. button. Then the Play mode will be entered.
- Insert editing is also possible without determining the edit-out point. Simply start insert editing at the edit-in point and, where you wish to stop insert editing, press the PAUSE/STANDB. button. Since this recorder incorporates a flying erase head, even this simplified procedure makes clean edits, though there may be a slight discrepancy between the actual and intended edit points.
- The recording mode (SP or LP) is automatically determined by the previous recording on which the new segment is inserted regardless of the setting of the SP/LP button ⑪ .
- If the edit-in point of the new scene lies in the SP mode and the edit-out point of the same scene lies in the LP mode or vice versa, the inserted picture will distort at the switching point in the Recording mode.
- If there is a non-recorded section on the tape, the Insert Edit mode will be cancelled automatically and the Play mode will be engaged.
- Insert editing is not possible with non-recorded cassettes or cassettes whose safety tab has been removed.

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RECORDING FROM AN EXTERNAL SOURCE

By connecting an external video source (such as a VideoMovie camera-recorder, 2nd video recorder, video camera, etc.) to the A/V2 EING. socket ⑭ , recording and/or editing are possible.

- For connection of these units, an appropriate cable is necessary.
- For connection of a video camera, a camera adapter is also necessary. Connect the camera adapter's PAUSE terminal to the recorder's PAUSE FERNBEDIENUNG connector ㉒ , then you can control taping start/stop with the camera's start/stop switch. For proper connection of a camera, consult a JVC dealer.

1. Turn the power on for all connected equipment.
2. Set the TV receiver as required.
3. Load a cassette.
4. Press either KANAL (∨ / ∧) button ㉕ or the numeric key 0/AV ⑮ to obtain "AU" in the channel display.
5. Set EINGANGS.-WAHL ⑦ to AV2.
6. Press SP/LP ⑪ for required mode.
7. Operate the source equipment properly.
8. Press AUFN./DA ⑯ .
   - When recording with a camera, press AUFN./DA and PAUSE/STANDB. to enter the Recording Standby mode, then control taping start/stop with the camera's start/stop switch.
9. To stop recording temporarily, press PAUSE/STANDB. ⑱ .
10. To end recording, press STOP ⑫ .

Note:

- For the operation of the source equipment, refer to the instruction manual of the relevant machine.

Recording from other S-VHS equipment

For recording sources which deliver separated Y/C signals, use the S EING. connector ⑬ or the A/V2 EING. peri-connector ⑭ , and proceed as follows:

(1) Insert an S-VHS cassette.
(2) Switch to the S-VHS mode (by pressing the S-VHS button ㉔).
(3) Select the AUX mode (by pressing the numeric key "0").
(4) Set the EINGANGS-WAHL switch ⑦ as required.
S : To record from the S EING. connector.
AV2 : To record from A/V2 EING. peri-connector.

IN CASE OF DIFFICULTY

What may initially appear to be trouble is not always a real problem. Make sure first . . . .

POWER AND TAPE TRANSPORT PROBLEMS

Symptoms	Check points
No power is applied to the recorder.	• Is the power cord disconnected? – Connect it.
Clock is functioning properly, but the recorder cannot be powered	• Is the TIMER indicator lit on the FDP? – Press SCHALTUHR to disengage the Timer Recording Standby mode.
Tape does not run during recording.	• Is the PAUSE/STANDB. button engaged? – Press the WIEDERGABE/X2 button.
Tape stops in the Rewind or Fast-Forward mode.	• Has the ZÄHLWERK-SPEICHER button been pressed? – Press it so [S] no longer appears on the FDP.
Tape will not rewind or fast forward.	• Is the tape already fully rewound or fast forwarded? – Check the cassette.

RECORDING PROBLEMS

Symptoms	Check points
Recording cannot be started.	• Is a cassete loaded? • Is the safety tab on the cassette removed? – Reseal the slot with cellophane tape.
Camera recording is not possible.	• Are the camera and the camera adapter correctly connected? • Is the power switch of the camera adapter set to ON? • Does the channel display indicate "AU"? – Press "0/AV".
Simulcast recording is not possible.	• Has the SIMUL button been pressed? – Press it so "SIM" appears on the FDP. • Is an audio source correctly connected to the AUDIO EING. connectors? – Check connections.
Timer recording is not possible.	• Have you set the clock correctly and programmed the timer correctly? – Check once again. • Is the TIMER indicator lit on the FDP? – Press SCHALTUHR.

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PLAYBACK PROBLEMS

Symptoms	Check points
Playback picture does not appear while the tape is running.	• Is the TV receiver set to the correct mode? See pages 39 and 40.
Noise appears during playback.	• Press SPURLAGE buttons.
Playback picture is blurred or interrupted while TV broadcasts are clear.	• Video heads may be dirty. – Head cleaning is necessary. Consult your JVC dealer.

HI-FI AUDIO PROBLEMS

Symptoms	Check points
TV sound cannot be recorded on hi-fi audio track.	• Has the SIMUL button been pressed? – Press it again so "SIM" no longer appears on the FDP.
Breaks are noticeable in hi-fi audio reproduction.	• Press the SPURLAGE buttons. (See page 46.) • Have you adjusted the recording level correctly? – Over-level recordings could be a cause. Adjust the level correctly next time. See page 46.
Soundtrack on the hi-fi audio track cannot be reproduced.	• Is the NORM indicator on the FDP lit? – Press the AUDIO MIX button for L and R to light as required.
Audio level indicators do not function.	• Is the PEGELANZEIGE switch set to a position other than EIN? – Set it to EIN.

OTHERS

Symptoms	Check points
Whistling or howling is heard from TV.	• Move camera or microphone away from TV or reduce TV sound volume.
Some channels are skipped over when selecting a channel.	• Those channels are preset to be skipped over. If you need them, restore them. (See page 44.)
Channel cannot be switched.	• Is recording in progress? – Press PAUSE/STANDB., select a desired channel and press WIEDERGABE/X2.

This recorder contains microcomputers. External electronic noise or interference could cause malfunctioning. In such cases, switch the power off and unplug the power cord. Then plug it in again and swtich on. Take out the cassette. After checking the cassette, operate the unit as usual.

HEAD CLEANING

- Picture playback may become blurred or interrupted while the TV programme received is clear. This does not mean that the recorded programme has been erased.
- Dirt accumulated on the video heads after long periods of use causes such problems. In this case, head cleaning requiring highly technical care is necessary.

For head cleaning, conslult the your JVC dealer.

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SPECIFICATIONS

Format		: S-VHS/VHS PAL standard with Hi-Fi audio
Video recording system		: Rotary two-head helical scan system with slant double-azimuth combination video heads
Hi-Fi audio recording system		: Deep-layer recording system conforming to stereo Hi-Fi VHS standard
No. of audio channels		: 2 Hi-Fi audio channels 1 normal audio channel
Video signal system		: PAL colour and separated Y/C signals, 625 lines
Tape width		: 12.65 mm
Tape speed	(SP)	: 23.39 mm/sec
	(LP)	: 11.70 mm/sec
Maximum recording time	(SP)	: 240 min. with E-240 video cassette
	(LP)	: 480 min. with E-240 video cassette
Temperature		
Operating		: 5°C to 40°C
Storage		: -20°C to 60°C
Humidity		
Operating		: 5 % to 80 %
Storage		: 35 % to 80 %
Power requirement		: 220 V~, 50/60 Hz
Power consumption		: 44 W
Video		
Input		: 0.5 to 2.0 Vp-p, 75 ohms, unbalanced
Output		: 1.0 Vp-p, 75 ohms, unbalanced
Signal-to-noise ratio		: 43 dB (Rohde & Schwarz noise meter) with BILDSCHÄRFE control at centre position
Horizontal resolution		: More than 400 lines (S-VHS)/ 250 lines (VHS) with BILDSCHÄRFE control at centre position
Audio		
Input		: Mic: -67 dBs, high impedance, unbalanced AUDIO EING. connector (RCA x 2): -8 dBs, 50 k-ohms, unbalanced A/V1 EING./AUSG. and A/V2 EING. socket (21-pin Peri connector): -3.8 dBs (CENELEC standard), 10 k-ohms, unbalanced
Output level		: A/V1 EING./AUSG. socket (21-pin Peri connector): -3.8 dBs (CENELEC standard), high impedance load AUDIO AUSG. connector (RCA x 2): -6 dBs, high impedance load
Output impedance		: Less than 1 k-ohm, unbalanced
Signal-to-noise ratio		: More than 40 dB
Frequency range		: 70 Hz to 10,000 Hz
Hi-Fi audio		
Frequency response		: 20 Hz – 20,000 Hz
Dynamic range		: More than 90 dB
Wow and flutter		: Less than 0.005 % WRMS
TV tuner/RF section		
Channel storage capacity		: 48 channels
Aerial input		: VHF 47 – 89 MHz 104 – 300 MHz 302 – 470 MHz UHF 470 – 862 MHz
Aerial output		: UHF channels 32 – 40 (Adjustable)

Digital clock/timer

Clock display	: 24-hour fluorescent digital display with day and date indication
Reference frequency	: Quartz controlled
Start time setting	: Within one year
Programming capacity	: 8 programmes

Dimensions	: 435 mm(W) x 105 mm(H) x 380 mm(D)
Weight	: 7.4 kg
Provided accessories	: Aerial cable, Infrared remote control, "R6"-size battery x 2, Audio cable (RCA-RCA) S-Video cable (4-pin/4-pin) Cassette tape (SE-180) VPV adapter
Optional accessory	: RGB signal converter KM-V7EG

Specifications shown are for SP mode unless otherwise specified.
Design and specifications subject to change without notice.